

Revision of the genus *Ochtheophilus* Mulsant & Rey, 1856 (Coleoptera: Staphylinidae, Oxytelinae)

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Revision of the genus *Ochtheophilus* Mulsant & Rey, 1856 (Coleoptera: Staphylinidae, Oxytelinae). - The species of the Holarctic genus *Ochtheophilus* are strictly hygrophilous and live in sandy or gravelly banks of streams, mostly under or between nearby stones, frequently also in moss on wet rocks. After the revision, 62 valid species are recognized, 25 of them new to science: *O. ashei* sp. nov. (USA: North Carolina), *O. assingi* sp. nov. (China: Shaanxi), *O. californicus* sp. nov. (USA: California), *O. davidi* sp. nov. (China: Sichuan), *O. enigmaticus* sp. nov. (China: Shaanxi), *O. gusarovii* sp. nov. (China: Sichuan), *O. hammondi* sp. nov. (USA: Arizona), *O. incognitus* sp. nov. (USA: Arkansas), *O. indicus* sp. nov. (India: Himachal Pradesh), *O. itoi* sp. nov. (Japan: Nara pref.), *O. kirschenblatti* sp. nov. (China: Xinjiang), *O. kleebergi* sp. nov. (Nepal: Central Region), *O. loebli* sp. nov. (Japan: Tochigi pref.), *O. merkli* sp. nov. (China: Sichuan), *O. qingyianus* sp. nov. (Nepal: Western Region), *O. ritae* sp. nov. (India: Uttarakhand), *O. schuelkei* sp. nov. (Kyrgyzstan), *O. szarukani* sp. nov. (China: Sichuan), *O. szeli* sp. nov. (Azerbaijan), *O. tibetanus* sp. nov. (China: Tibet), *O. tichomirovae* sp. nov. (India: Uttarakhand), *O. uhligi* sp. nov. (China: Hubei), *O. wrasei* sp. nov. (China: Yunnan), *O. wunderlei* sp. nov. (Cyprus), *O. zerchei* sp. nov. (Nepal: Western Region). The following new synonyms are proposed: *O. forticornis* (Hochhuth, 1860) = *A. antennatus* Watanabe & Shibata, 1961, syn. nov., = *A. confinis* Smetana, 1968, syn. nov., *O. lenkoranus* (Scheerpeltz, 1950) = *A. swaneticus* Yablokov-Khnzorian, 1974, syn. nov., *O. planus* (LeConte, 1861) = *A. curtippennis* Eppelsheim, 1893, syn. nov., *O. praepositus* Mulsant & Rey, 1878 = *A. ruteri* Jarrige, 1949, syn. nov., *O. rosenhaueri* (Kiesenwetter, 1850) = *A. jailensis* Scheerpeltz, 1950, syn. nov., = *A. corsicus* Fagel, 1956, syn. nov., *O. sericinus* (Solsky, 1874) = *Psilotrichus elegans* Luze, 1904, syn. nov., = *Ancyrophorus kerzhneri* Kashcheev, 1989, syn. nov., = *A. gvosdevi* Kashcheev, 1999, syn. nov., *O. venustulus* (Rosenhauer, 1856) = *A. mediterraneus* Scheerpeltz, 1950, syn. nov., *O. vulgaris* (Watanabe & Shibata, 1961) = *O. masatakai* Watanabe, 2007, syn. nov., lectotypes are designated for the following 27 nominal species: *Trogophloeus angustatus* Erichson, 1840, *Ancyrophorus longipennis* var. *angustior* Bernhauer, 1943, *Ancyrophorus aureus* Fauvel, 1871, *Ancyrophorus aurorans* Peyerimhoff, 1914, *Ancyrophorus basicornis* Cameron, 1941, *Phloeonaeus biimpressus*

Mäklin, 1852, *Ancyrophorus carnicus* Scheerpeltz, 1950, *Ancyrophorus championi* Bernhauer, 1926, *Ancyrophorus curtipennis* Eppelsheim, 1893, *Ancyrophorus emarginatus* Fauvel, 1871, *Trogophloeus flexuosus* Mulsant & Rey, 1856, *Ancyrophorus forticornis* Hochhuth, 1860, *Ancyrophorus jailensis* Scheerpeltz, 1950, *Ancyrophorus kashmiricus* Cameron, 1941, *Ancyrophorus lenkoranus* Scheerpeltz, 1950, *Trogophloeus longipennis* Fairmaire & Laboulbène, 1856, *Ancyrophorus mediterraneus* Scheerpeltz, 1950, *Ancyrophorus monticola* Cameron, 1924, *Ancyrophorus nigerrimus* Cameron, 1941, *Ancyrophorus nitidus* Cameron, 1924, *Ochtheophilus oblitus* Mulsant & Rey, 1878, *Trogophloeus omalinus* Erichson, 1840, *Ancyrophorus planus* LeConte, 1861, *Ochtheophilus praepositus* Mulsant & Rey, 1878, *Ancyrophorus proximus* Cameron, 1941, *Trogophloeus rosenhaueri* Kiesenwetter, 1850, *Ancyrophorus strandi* Scheerpeltz, 1950. All the species are described or redescribed and attributed to species groups; important distinguishing characters, including the sexual characters of both sexes, are illustrated. A key to species is provided. The available data on the distribution and the bionomics of the species are compiled. All exact locality data are complemented with their geographical coordinates.

Keywords: Holarctics - Himalaya - riparian habitats - gravelly streambanks and sprinkled moss - *Ochtheophilus* - key - lectotypes - new synonyms - new species.

INTRODUCTION

The genus *Ochtheophilus* is known from the temperate Northern Hemisphere. The range of distribution also includes the Himalayas, Taiwan and the southwestern, mountainous Chinese provinces. The genus is so far not recorded from Burma, but its occurrence is quite possible in the inaccessible northern ranges. Both adults and larvae normally inhabit banks of streams. They either live between gravel particles / coarse sand or found in moss on wet rocks. Some species are known from caves, but this is supposedly not their primary habitat. Specimens are rarely recorded to fly to light. Identification of species has always been a difficult task, and although there were a couple of revisionary attempts, they all failed to utilize the characters of the internal sac of the aedeagus or study the morphology of the terminal abdominal segments. Such an approach proved to be essential in determining the identity of certain taxa and for accurate discrimination among closely related species.

Both larvae and adults are highly hygrophilous and require wet habitats, be it sandy or gravelly banks of rivers and streams (but always running water), or soaking wet moss on rocks. Some species are facultatively cavernicolous. The species which is relatively often found in caves is *O. aureus*, but occasionally others (*O. angustatus*, *O. brachypterus*, *O. tatricus*) are reported, too. As far as it is presently suspected, they feed on algae or various other small particles of freshwater plant material. Almost nothing is known about the life cycle of *Ochtheophilus*. With the exception of *O. aureus*, which was found in caves most often, and was collected all year round, most specimens were obtained from the spring to autumn months, with the high elevation collections peaking in mid-summer. Specimens are rather rarely recorded to fly to light

— although all have developed wings and are capable of flight. This could be partly due to the fact that most light traps are not placed in the vicinity of streams, and it could be that specimens do not fly long distances. On the other hand, a number of specimens were collected by car-nets, indicating that they are frequent flyers. Larvae were first mentioned in Ganglbauer (1895), then a tentatively attributed specimen was included in a key to genera by Kasule (1968). A proper larval description of *O. aureus* was published by Bourne (1975) and the larva of the same species was described again by Bruge (2007) without reference to the earlier description. The defensive gland was mentioned in Dettner (1987). Although the genus *Ochtheophilus* is presumably an ancient group within Oxytelinae, no fossils or subfossils are known to the author.

TAXONOMIC HISTORY

The genus *Ochtheophilus* was described by Mulsant & Rey (1856a and 1856b) in a short article, including *Ochtheophilus flexuosus*, also described there as new. Another genus-group name, *Ancyrophorus* was established by Kraatz (1857), who placed the previously described taxa *Trogophloeus rosenhaueri* Kiesenwetter, 1850, *Trogophloeus longipennis* Fairmaire & Laboulbène, 1856, *Trogophloeus flexuosus* Fairmaire & Laboulbène, 1856, *Trogophloeus omalinus* Erichson, 1840, *Trogophloeus angustatus* Erichson, 1840, *Trogophloeus venustulus* Rosenhauer, 1856 in it, thereby providing a good characterization of the new taxon. The confusion about the publication dates and the relatively well-known nature (also excellent quality) of Kraatz's work made most workers accept Kraatz's name as valid for about a century. Not until the 1970s, following the generic revision of Herman (1970), did *Ochtheophilus* gain validity over *Ancyrophorus*. (One should immediately note here, that the type species of the genus, *Ochtheophilus flexuosus* was described twice, in the same year, under the same specific name, by different authors, without any reference to each other.) This was only followed by interpretation difficulties of some taxa, most importantly the mix-up of sibling species *O. rosenhaueri* Kiesenwetter, 1850 and *O. praepositus* Mulsant & Rey, 1878, causing multiple descriptions of these species and resulting in not less than 7 available names for these 2 species. Only a few specialists realized the true identity of *O. praepositus* and virtually nobody could correctly identify *O. rosenhaueri*, generally confusing them under the name *O. longipennis* Fairmaire & Laboulbène, the type of which is actually conspecific with that of *O. rosenhaueri*.

The first species from the New World was described by LeConte (1861), and a number of taxa were established by Cameron (1920, 1941) from the Himalayas, where the genus proved to be extremely species-rich.

There were several regional revisionary attempts on the genus, most notably by Scheerpeltz (1950), who treated the Palaearctic taxa, Fagel (several papers between 1951-57) clarified the identity of a few Central and Southern European species, Watanabe & Shibata (1961) first reported the genus from Japan and Smetana (1967) reviewed the species of Czechoslovakia. The latter two works are the ones where genitalia illustrations were published for the first time. However, during this period many of the characters necessary to resolve the problems and unambiguously define taxa were either unknown or their importance was not properly recognized. The male genitalia was believed to have great uniformity (and therefore limited value), no geni-

talic characters of females were recognized and the importance of the shapes of the apical edge of genital segments was rarely noted and not generally applied as a key character.

By the end of the XXth Century, 56 available names were published, many of which proved to be synonyms, but most importantly the majority were not applied correctly. The situation was always the worst in Central Europe, where more than half of the valid names had to be changed or newly introduced to the species list (Makranczy, 2001).

MATERIAL AND METHODS

For the tens of thousands of specimens examined, most belonging to common species and resulting in extremely long listings of label data, in large part not very interesting, a special handling of label text was decided upon. All specimens of the newly described species, all (previously) validly designated holo- and paratypes plus specimens of the rarer half of the previously named species are listed with their full data (but not verbatim) between “ ”. Herein designated lecto- and paralectotypes have their label text presented verbatim, where the symbol “\” is a separator between each individual label, while “;” means line breaks. Specimen data of rather common species are listed under Appendix (with only collecting months and no collector's name). Data are arranged by countries/subdivisions if this makes sense. Names of higher administrative units are translated into English, but all other locality data are mostly given in the original language (and spelling) used on the label of the specimen. Geographical coordinates are supplied for as many locality data as possible. Such data found on the labels are presented as is. Coordinates supplied by the collector are included in round brackets and are usually in the most widespread degrees and minutes format. The ones calculated by the author using maps, gazetteers and internet resources are presented between square brackets and in the format of decimal degrees, latitude and longitude separated by slash (/). Text within brackets [] is explanatory and was not included in the original labels.

Abbreviations of collections used in the present study are:

- AMNH American Museum of Natural History, New York, NY, USA
- BMNH The Natural History Museum, London, United Kingdom
- CASC California Academy of Sciences, San Francisco, California, USA
- CNCI Canadian National Collection of Insects, Ottawa, ON, Canada
- CNUK Chungnam National University Insect Collection, Daejeon, South Korea
- FMNH Field Museum of Natural History, Chicago, IL, USA
- HNHM Hungarian Natural History Museum, Budapest, Hungary
- ISNB Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium
- ISZP Institute of Systematic Zoology, Polish Academy of Sciences, Krakow, Poland
- IZAS Institute of Zoology, Chinese Academy of Sciences, Beijing, China
- IZUI Institut für Zoologie der Universität Innsbruck (Tiroler Landesmuseum Ferdinandeum) Innsbruck, Austria

- JBWM J.B. Wallis Museum of Entomology, Dept. of Entomology, Univ. of Manitoba, Winnipeg, MB, Canada
- MCSN Museo Civico di Storia Naturale "Giacomo Doria", Genova, Italy
- MCZN Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA
- MGAB Muzeul de Istoria Naturala "Grigore Antipa", Bucharest, Romania
- MHNG Muséum d'Histoire Naturelle, Genève, Switzerland
- MHNL Muséum d'Histoire Naturelle de Lyon, Lyon, France
- MMUE Manchester Museum, The University of Manchester, Manchester, England
- MNHP Muséum National d'Histoire Naturelle, Paris, France
- MNMS Museo Nacional de Ciencias Naturales, Madrid, Spain
- MSNV Museo Civico di Storia Naturale, Verona, Italy
- MZHF Zoological Museum, University of Helsinki, Helsinki, Finland
- MZLU Museum of Zoology, Lund University, Lund, Sweden
- NHMB Naturhistorisches Museum, Basel, Switzerland
- NIBR National Institute of Biological Resources, Incheon, South Korea
- NHMW Naturhistorisches Museum Wien, Vienna, Austria
- NKME Naturkundemuseum Erfurt, Erfurt, Germany
- NMBS Naturhistorische Museums, Bern, Switzerland
- NMPC National Museum (Natural History), Prague, Czech Republic
- OXUM Oxford University Museum (Hope Entomological Collections), Oxford, England
- PMSL Slovenian Natural History Museum, Ljubljana, Slovenia
- SDEI Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany
- SEMC Snow Entomological Collection, University of Kansas, Lawrence, KS, USA
- SMBC Šarišské múzeum, Bardejov, Slovakia (= coll. Jászay)
- SMDV Spencer Entomological Museum, University of British Columbia, Vancouver, BC, Canada
- SMFD Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt-am-Main, Germany
- SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany
- SMTD Staatlichen Museums für Tierkunde, Dresden, Germany
- SNMC Slovenské Národné Muzeum, Bratislava, Slovakia (= coll. Roubal)
- USNM National Museum of Natural History (Smithsonian Institution), Washington DC, USA
- UWCP University of Wrocław, Museum of Natural History, Wrocław, Poland
- ZISP Zoological Institute, Russian Academy of Science, St. Petersburg, Russia
- ZMHB Museum für Naturkunde der Humboldt Universität, Berlin, Germany
- ZMUC Zoological Museum, University of Copenhagen, Copenhagen, Denmark
- ZMUM Zoological Museum, Moscow Lomonosov State University, Moscow, Russia
- ZMUN Zoological Museum, University of Oslo, Oslo, Norway
- ZSMC Zoologische Staatssammlung München, Munich, Germany
- coll. Adorno = private collection of Antonio Adorno, Catania, Italy (Sicily)
- coll. Assing = private collection of Volker Assing, Hannover, Germany
- coll. Clayhills = private collection of Tom Clayhills, Parainen, Finland

- coll. Dauphin = private collection of Patrick Dauphin, Bordeaux, France
 coll. Gollkowski = private collection of Volker Gollkowski, Oelsnitz, Austria
 coll. Ito = private collection of Tateo Ito, Kyoto, Japan
 coll. Janak = private collection of Jiří Janák, Rytně nad Bílinou, Czech Republic
 coll. Kapp = private collection of Andreas Kapp, Rankweil, Austria
 coll. Kleeberg = private collection of Andreas Kleeberg, Berlin, Germany
 coll. Petrenko = private collection of Dr. Andrey A. Petrenko, Kiev, Ukraine
 coll. Pütz = private collection of Andreas Pütz, Eisenhüttenstadt, Germany
 coll. Renner = private collection of Klaus Renner, Bielefeld, Germany
 coll. Rougemont = private collection of Guillaume de Rougemont, now in OXUM
 coll. Ryvkin = private collection of Aleksandr Ryvkin, Moscow, Russia now including also coll. Yeskov (K. Yu. [К.Ю.Еськов], Moscow)
 coll. Schülke = private collection of Michael Schülke, Berlin, Germany
 coll. Shavrin = private collection of Alexey Shavrin, Daugavpils, Latvia
 coll. Tagliapietra = private collection of Andrea Tagliapietra, Verona, Italy
 coll. Tronquet = private collection of Marc Tronquet, Molitg-les-Bains, France
 coll. Watanabe = collection of Dr. Yasuaki Watanabe, Tokyo, Japan, now in Laboratory of Entomology, Tokyo University of Agriculture, Tokyo, Japan (TULE)
 coll. Webster = private collection of Reginald P. Webster, Charters Settlement, NB, Canada
 coll. Wunderle = private collection of Paul Wunderle, Mönchengladbach, Germany
 coll. Yanushev = private collection of V. V. Yanushev, Moscow, Russia
 coll. Zanetti = private collection of Dr. Adriano Zanetti, Verona, Italy

Codes used for the measurements: HW = head width with eyes; TW = head width at temples; PW = maximum width of pronotum; SW = approximate width of elytra at shoulders; AW = maximum width of abdomen; HL = head length from front margin of clypeus to the beginning of neck (the line connecting posterior ends of temples); EL = eye length; TL = length of temple; PL = length of pronotum in the middle-line; SL = length of elytra from shoulder; SC = length of elytra from hind apex of scutellum; FB = forebody length (combined length of head, pronotum and elytra); BL = approximate body length. All measured from dorsal view. For description of the aedeagal morphology a set of terms are introduced – not to be confused with inner sclerite homology (Makranczy, 2013) established for the related *Thinodromus* Kraatz, 1857 –, coded as follows: BO = basal orifice; OA = basal orifice appendix; AP = apical opening processes of median lobe; DA = digitiform lamellar appendix of apical orifice; IS = (primary) inner sclerite (copulatory piece?); SS = secondary inner sclerite; VM = ventral margin of apical orifice (on parameral side); SB = striated band (can be elongate or short, “croissant-like”); AT = attachment (joint) of paramere; MS = median lobe shell; PA = paramere apex; PR = main branch of paramere; SP = secondary lobe of paramere

For descriptions and measurements a Leica MZ 12.5 stereoscopic microscope was used. For the line drawings permanent preparations were made in Euparal mounting medium on plastic cards pinned with the specimens or on regular microscopic slides with cover glasses. The preparation techniques for these are described in

detail in Makranczy (2006). Drawing was done with a Jenalab (Carl Zeiss, Jena) compound microscope and drawing tubes (camera lucida). The Scanning Electron Micrographs (SEM) of gold+palladium coated objects were taken with a LEO1550 Field Emission Scanning Electron Microscope, other images of uncoated specimens with a Hitachi S-2600 N Scanning Electron Microscope. Black & white photographic plates are composed of images originally shot on Ilford PANF PLUS fine grained (black & white) film, then scanned and processed with imaging software. For the colour habitus photographs a Nikon D4 camera with Mitutoyo PlanApo 10x ELDW lens was used and layers montaged with ZereneStacker.

As this project started more than 15 years ago, I must reflect on an argument of Maruyama (2004) for glass to be used for genital preparations instead of plastic cards. It is true that plastic may deteriorate with time, but it largely depends on its actual chemical composition and quality (besides storage factors). Of the vast number of Euparal-embedded dissected genitalia made for this project (more than 2000) many are now older than 14 years and not a single one exhibited the kind of deterioration Maruyama described in the before mentioned short note. So it can be concluded that apart from the plastic type, the cleanliness of the plastic, the quality of mounting medium and the preparation method all contributed to the durability of the genital preparations. While, of course I have seen quite a number of problematic preparations made by other workers, the reasons were obviously the cleanliness, thickness of the card and the mounting medium itself. Dilution or mixing of Euparal (used for the embedding) with any other agent should be avoided, as this may eventually cause cracks in the mounting medium or even its detachment from the slide. The other unstudied factor is specimen handling – these days many museums use deep freezing (below minus 20°C) or heating (ca. 55°C) for pest control. This can become a problem for genital preparations.

The present work was prepared mostly between the summer of 1999 and the summer of 2004; in later years the manuscript went through smaller revisions and changes. The black & white photographic plates were made in 2001, consequently they miss the new species discovered after that date. Line drawings were made in several sessions (the first of these produced the drawings in Makranczy, 2001). In the process of the final preparation for publication most of the early, substandard drawings were re-made to match the quality and style of the ones made circa 2004. Mouthpart details were examined and drawn during 2012, also the majority of the Scanning Electron Micrographs (SEM) were taken in 2011–2012, a smaller portion was produced in 2002 with support provided by the Burton Student Microscopy (SEM) Grant at the University of Kansas. The SEM images are partly used to illustrate some important morphological details but also depict habitus of those species that are not featured on the black & white plates or are there but have great significance.

As the manuscript went through several rewrites and changes in the course of more than a decade, the concepts about subdivision also suffered radical changes. For such a rather large genus some kind of subdivision is deemed necessary but the ranks of these groups are certainly debatable. It was determined at the very beginning that discarding the former subgeneric system is more or less unavoidable and an attempt to mend this is pointless. On one hand, these subgenera were not based on a larger view

of the morphological diversity: more or less arbitrarily and accidentally designated type species are bearers of genus-group names, for example, *O. flexuosus* is a rather unfavourable choice as genotype, quite uncharacteristic of the group in general. On the other hand, the herein created system is not backed by any kind of phylogenetic analysis, and at the current state of knowledge, where the number of unambiguous diagnostic features is so low, a morphology based analysis is not expected to do any good. Therefore, the subgenera of earlier authors are listed here as synonymous with *Ochtheophilus* – for the time being, it seems best to follow the species group concept consistently.

TAXONOMY

KEY TO THE KNOWN *OCHTHEPHILUS* SPECIES

The key below attempted to incorporate external diagnostic traits as deep down its structure as possible. Naturally, this is a very complicated task as the classification is primarily based on genital features. Between some closely related congeners only genitalia examination can provide reliable separation, anyway. Bearing in mind the rather great infraspecific variability experienced in this group, in all cases it is advisable to make a few dissections prior to attempting to identify any taxa, or later, double-checking the identifications. Besides key couplets, diagnostic information is also given for each species under "Comparative notes". It is expected that the current treatment provides a pretty good coverage for all regions in the distribution range except the Himalayas and especially China. From the latter areas still many new species are likely to be discovered.

- 1a Tergite VII palisade fringe with filaments of nearly uniform length 2
- 1b Tergite VII palisade fringe with a medial field of larger and also longer
filaments 42
- 2a In palisade fringe of tergite VII medial filaments broadened into finger-
like structures (while keep the same length), aedeagus without inner
sclerite (I. *Ochtheophilus aurorans* species group) 4
- 2b In palisade fringe of tergite VII medial filaments do not differ in shape
or size from the others, aedeagus with inner sclerite 3
- 3a Palisade fringe of tergite VII with approx. 8-10 broader, finger-like
structures in middle (Fig. 38) [Morocco, Algeria] . . *O. aurorans* (Peyerimhoff)
- 3b Palisade fringe of tergite VII with approx. 16-18 broader, finger-like
structures in middle (Fig. 42) [Central Europe, Balkans] *O. scheerpeltzi* (Fagel)
- 4a Antennomere 7 (and in a lesser extent antennomere 8 also) asym-
metrical, with characteristic "swelling" on one side (Figs 70, 95, 117).
(Some species with reverse "C"-shaped inner sclerite in the aedeagus,
others with dense and irregular elytral setation; asymmetry of antenno-
meres observable well only in species with elongate antennae, conse-
quently the single species, *O. filum*, with transverse mid-antennal
segments (Fig. 46), hardly distinguishable by this feature, but uniquely
small, slender and light coloured.) 5
- 4b Antennomere 7 (and 8) with normal, symmetrical form 12

- 5a Elytra always covered with rather evenly spaced and sized setae, more or less arranged in oblique lines. Posterior inner angles of elytra only moderately rounded. Neck with a few occasional hairs only. Aedeagus with a rather large reverse "C"-shaped inner sclerite (Figs 49-51, 54-56, 59-61) (II. *Ochtheophilus angustatus* species group) 6
- 5b Elytra with dense and irregular setation, with the larger setae often twice as long as the smaller ones (Figs 146, 148, 170, 172). Posterior inner angles of elytra very broadly rounded. Neck with setation in (and around) longitudinal midline. Aedeagus with inner sclerite, but of different shape (III. *Ochtheophilus emarginatus* species group) 8
- 6a Middle antennomeres very transverse. [Portugal, Spain] *O. filum* (Fauvel)
- 6b Middle antennomeres rather elongate 7
- 7a Smaller species (pronotal width 0.47-0.58 mm) with smaller eyes (eye length 0.13-0.15 mm). [Mediterranean Basin, southern Central Europe] *O. angustatus* (Erichson)
- 7b Larger species (pronotal width 0.55-0.65 mm) with smaller eyes (eye length 0.17-0.20 mm). [Central Europe, N-Italy, N-Balkans, Transcaucasia, Central Asia] *O. carnicus* (Scheerpeltz)
- 8a Tergite X apical margin only finely and irregularly sinuate. Male hind femur with tubercle in inner 1/3 [Japan] . . *O. japonicus* (Watanabe & Shibata)
- 8b Tergite X apical margin with a series of deeper or more shallow incisions. Hind femur unmodified 9
- 9a Tergite X apical margin with a series of deeper incisions (Figs 127-128) [Mediterranean Basin, Turkey, Caucasus, Iran, Afghanistan] *O. emarginatus* (Fauvel)
- 9b Tergite X apical margin with a series of more shallow incisions (Figs 129, 149-153) 10
- 10a Elytra lighter, yellowish-reddish except apical dark stripe [Transcaucasia, Afghanistan, Central Asia, N-China] *O. sericinus* (Solsky)
- 10b Elytra more unicolorous 11
- 11a Inner sclerite of aedeagus without constriction in middle [N-India, China: Sichuan] *O. davidi* sp. nov.
- 11b Inner sclerite of aedeagus constricted in middle [Tibet] . . *O. tibetanus* sp. nov.
- 12a Tergite VIII apical angles forming sharp spikes (IV. *Ochtheophilus aureus* species group) 13
- 12b Tergite VIII apical angles more or less rounded, normal 14
- 13a Shorter spikes (Fig. 173) [N-Africa, Western Europe, Balkans, Turkey] *O. aureus* (Fauvel)
- 13b Longer spikes (Fig. 174) [California to British Columbia] *O. californicus* sp. nov.
- 14a Parameres of aedeagus with a membranous edge that turns from the inside to the outside slightly above the middle, AT with unique formation as in Fig. 135 (V. *Ochtheophilus laevis* species group) [Russian Far East, Japan, NE-China, Korea] *O. laevis* (Watanabe & Shibata)
- 14b Parameres without such inverted membranous edge, AT normal 15

- 15a Aedeagus with a one-part inner sclerite (Fig. 37-IS). Platelike armature in hypopharynx appearing uniformly sclerotized (Figs 10-12). Pronotal side usually bisinuate before posterior corners. Antennomere 6 more or less fitting in the gradient of neighbouring articles, sometimes only appearing slightly shorter than antennomere 5 (VI. *Ochtheophilus prae-positus* species group) 16
- 15b Aedeagus with a two-part inner sclerite (Fig. 37-IS-SS). Sclerotization of platelike armature in hypopharynx interrupted in middle by a transverse, less sclerotized stripe (Figs 13-17). Pronotal side usually slightly concave just before posterior corners. Antennomere 6 smaller and narrower (Figs 353-357) than neighbours (deviating from a perfect gradient of mid-antennal articles), but expression of this (and previous) feature varies (VII. *Ochtheophilus omalinus* species group) 29
- 16a Pronotum with exceptionally broad marginal bead (especially on sides), strongly sinuate, anterior corners rather angled (Fig. 4) [Portugal, Spain, continental Western Europe] *O. flexuosus* Mulsant & Rey
- 16b Pronotum without such broad marginal bead, sides much less conspicuously sinuate (if at all) anterior corners broadly rounded 17
- 17a Antennomeres 7-9 very strongly transverse (without apical cone about 2x broader than long), whole body (except black head) very strongly reddish (Fig. 429) [Pacific Coast Ranges] *O. biimpressus* (Mäklin)
- 17b Antennomeres 7-9 not more than moderately transverse, body more brownish-blackish 18
- 18a Basal edge of tergite VIII pulled out in an obtuse angle – more strongly in females (Figs 176, 178) than in males (Figs 175, 177) 19
- 18b Basal edge of tergite VIII more or less evenly arched, sometimes with a small concavity in middle 20
- 19a Larger species (PW=0.78-0.85 mm, FB=2.12-2.39 mm), with digitiform lamellar appendix of median lobe subapical orifice (DA) enormously developed (Fig. 159) [Caucasus, Caucasus Minor] . *O. solodovnikovi* Gildenkov
- 19b Smaller species (PW=0.56-0.65 mm, FB=1.80-2.13 mm) with digitiform lamellar appendix of median lobe subapical orifice (DA) rather small (Fig. 164) [S-Alps, N-Carpathians, Balkans, Turkey, Crimea, Transcaucasia] *O. lenkoranus* (Scheerpeltz)
- 20a Smaller species with head width (HW) very close to pronotal width (PW) . . 21
- 20b Larger species with head width (HW) much smaller than pronotal width (PW) 22
- 21a Pronotal punctation more pronounced, easily discernible among strong microsculpture. Female tergite X with pointed apex (Figs 225, 282) [Western Europe to N-Carpathians and to N-Greece] . *O. angustior* (Bernhauer)
- 21b Pronotal punctation more obscured, meshing into strong microsculpture. Female tergite X with normal, more rounded apex [Cyprus, Antalya] *O. wunderlei* sp. nov.
- 22a Species with smaller, less prominent (less bulging) eyes; temple width just perceptibly smaller than head width at eyes 23

- 22b Species with larger, more prominent (bulging) eyes; temple width about 10% smaller than head width at eyes 26
- 23a Short elytra (SL<0.90 mm, SC<0.82 mm) [Pacific Coast Ranges (Canada, N-USA), Rocky Mountains] *O. columbiensis* (Hatch)
- 23b Longer elytra (SL>0.90 mm, SC>0.82 mm) 22
- 24a Antennae a little shorter, segment 6 slightly transverse. Elytra narrow and elongate (width together less than 1.0 mm, usually around 0.8 mm) [Alpes-Maritimes, Alps, N-Italy, Carpathians, N-Balkans] *O. tatricus* (Smetana)
- 24b Antennae a little longer, more robust, segment 6 slightly elongate. Elytra broader (around or slightly more than 1 mm wide together), comparatively shorter 25
- 25a Inner sclerite of aedeagus more boomerang-shaped (Figs 189-191) [?France, S-Alps, Carpathians] *O. brachypterus* (Jeannel & Jarrige)
- 25b Inner sclerite of aedeagus more lollipop-shaped (Figs 179-181) [Pyrénées] *O. legrosi* (Jarrige)
- 26a Rather large species with short, often poorly developed temples, micro-sculpture fading around frontoclypeal suture. Aedeagus with only a weakly sclerotized, not longitudinally elongate inner sclerite (Figs 217-219) [East Siberia, Russian Far East, Alaska, Rocky and Appalachian Mountains] *O. planus* (LeConte)
- 26b Inner sclerite of aedeagus with a prominent (strongly sclerotized), longitudinal shaft (Figs 207-209, 212-214) 21
- 27a Antennae more robust (articles 9-10 about as long as broad), elytra shorter (normally about as long as their width together), tergite IX of the female (Fig. 28) semitriangular, convex, only stronger sclerotized area showing occasional concavity. Very similar aedeagus with ventral margin of apical orifice (VM) usually arched, central shaft of inner sclerite with apical notches on the right side (Figs 207-209) [Alps, Carpathians, N-Balkans, Caucasus, Turkey] . . . *O. praepositus* Mulsant & Rey
- 27b Antennae more slender (articles 9-10 usually slightly elongate [longer than broad]), elytra far longer than their width together, ventral apical edge of tergite IX of females (Fig. 29) concave. Very similar aedeagus with ventral margin of apical orifice (VM) mostly angular (pointed, nearly right-angled), central shaft of inner sclerite with apical notches on the left side (Figs 212-214) [Alpes-Maritimes, Corsica, Alps, N-Carpathians, Sicily, NE-Mediterranean, Caucasus] *O. rosenhaueri* (Kiesenwetter)
- 28a Small eyes, large temples (temples as long as 2/3 of eye) (Fig. 349) [China: Xinjiang, Qinghai] *O. kirschenblatti* sp. nov.
- 28b Large eyes, small temples (not longer than 1/2 of eye) 29
- 29a Tergite X in both sexes conspicuously modified, differing from the ground plan (p. 68 in Makranczy, 2006, Figs 58-67) of evenly arched apex with serrate edge 30
- 29b Tergite X without conspicuous modification (apex in males usually broader than in females) 36

- 30a Tergite X apex modifications with lateral or medial teeth 31
- 30b Tergite X apex modified but without teeth (Figs 332, 362-364) 34
- 31a Tergite X apex with medial teeth 32
- 31b Tergite X apex with lateral teeth (the two species here also united by possessing peculiarly longer setation on abdominal tergites and setae particularly dense laterally, at laterosclerites; furthermore, both with a large, non-setigerous puncture at middle of vertex) 33
- 32a Medial tooth of tergite X apex not reaching half length of incision between lateral lobes (Figs 283-284), aedeagus median lobe apical opening processes (AP) more narrow and apex narrowly rounded [N-Africa, Europe, Turkey, Caucasus] *O. omalinus* (Erichson)
- 32b Medial tooth of tergite X apex slightly exceeding half length of incision between lateral lobes (Figs 285, 304), aedeagus median lobe apical opening processes (AP) much broader at apex [Transcaucasus, possibly N-Iran] *O. szeli* sp. nov.
- 33a Tergite X apex lateral teeth slightly incurved, medial serrate margin less evenly curved (Figs 328-329) [China: Sichuan] *O. gusarovi* sp. nov.
- 33b Tergite X apex lateral teeth straight, medial serrate margin evenly curved (Figs 305-306) [Nepal, China: Sichuan] *O. qingyianus* sp. nov.
- 34a Apex of tergite X with a pair of smaller incisions to the sides, but "lobes" laterad not formed like teeth (Figs 330-331) [North Africa, Portugal, Spain, Mediterranean Basin, Iran] *O. venustulus* (Rosenhauer)
- 34b Apex of tergite X without regular incisions 35
- 35a Somewhat broadened, semi-truncate apex of tergite X lined with irregular incisions (Figs 332, 364) [N-Africa, Europe, TurkeyE- Canada] *O. andalusiacus* (Fagel)
- 35b Somewhat broadened, semi-truncate apex of tergite X with normal serrate edge (Figs 362-363) [Appalachian Mountains] *O. ashei* sp. nov.
- 36a Aedeagus with reverse E-shaped inner sclerite with distinct and sclerotized, curved basal arm 37
- 36b Aedeagus inner sclerite with different structure 38
- 37a Aedeagus inner sclerite with apical arm pointed (Figs 338-340) [East Siberia, Russian Far East, Mongolia, NE-China, Korea, Japan, North America and Scandinavia] *O. forticornis* (Hochhuth)
- 37b Aedeagus inner sclerite with apical arm shorter and blunt (Figs 343-345) [N-Scandinavia, Lapponia, N-Siberia, Alaska, Canada] *O. strandi* (Scheerpeltz)
- 38a Aedeagus inner sclerite with apical part consisting only of lamellar structures (Figs 319-321, 333-335) 39
- 38b Aedeagus inner sclerite with sclerotized structures stretching over entire length (Figs 365, 369-371, 374-376) 40
- 39a Between deeper but scattered head punctures large shiny interspaces, with only traces of microsculpture [Kashmir, Nepal, N-India] *O. nitidus* (Cameron)
- 39b Even distribution of more shallow punctures, all surfaces on head microsculptured [Kyrgyzstan, Tajikistan] *O. schuelkei* sp. nov.

- 40a Lighter elytra. Head surface more uneven (elevated and depressed areas alternating), thereby obscuring a rather rough but scattered and less distinct punctuation [USA: Ozarks] *O. incognitus* sp. nov.
- 40b Unicolorous blackish brown species. Head surface rather even and flat, punctures smaller but more distinct and deeper 41
- 41a Antenna shorter, articles 8-9 usually slightly transverse (Fig. 382); punctuation of vertex more distinct, but in middle of vertex more sparse, coriaceous microsculpture weaker, especially in middle of vertex. Head more transverse, more trapezoid [China: Shaanxi] *O. enigmaticus* sp. nov.
- 41b Antenna more elongate, articles 8-9 at least as long as broad (Fig. 380); punctuation of vertex more shallow but with more even density, microsculpture stronger. Head a little more elongate and "parallel-sided" [Kashmir, Nepal, N-India, Sikkim, China: Sichuan] *O. nepalensis* (Scheerpeltz)
- 42a Aedeagus with unmodified (croissant-like) striated bands (Fig. 37-SB) and simple parameres 43
- 42b Aedeagus with elongate striated bands (approaching basal orifice) at apical orifice (e.g. Fig. 467) and with modified parameres (with secondary lobe or peculiarly broadened) (X. *Ochtheophilus monticola* species group) . . 49
- 43a Female ringstructure smaller or thick-walled with a peculiarly long thread-like tail (Figs 396-397, 402, 404-405, 414-415, 417-418, 421-422, 438-439) (VIII. *Ochtheophilus vulgaris* species group) 44
- 43b Female ringstructure larger, elongate loop-like (thin-walled), parts often in steplike shifted parallel planes (Figs 441-442) (IX. *Ochtheophilus wrasei* species group) [China: Yunnan] *O. wrasei* sp. nov.
- 44a Large species with body setation rather fine, above average long, irregular in spacing and length 45
- 44b Medium-sized to large species with setation (at least on elytra) evenly sized and spaced 46
- 45a Aedeagus with long and slender parameres, apical opening processes (AP) elongate, slender and pointed (Fig. 398) [N-India, Nepal, China: Yunnan] *O. championi* (Bernhauer)
- 45b Aedeagus with parameres rather long but unusually straight and very broad, densely covered with (sensory) pores all the length, apical opening processes (AP) more stout and blunt (Fig. 395) [N-India] *O. nigerrimus* (Cameron)
- 46a More robust species with larger, broader elytra (HW>0.62 mm, SW>0.90 mm) 47
- 46b More slender species with smaller, shorter elytra (HW<0.62 mm, SW<0.90 mm) 49
- 47a Elytra lighter, reddish [Kazakhstan, Kyrgyzstan, Tajikistan] *O. ketmenicus* (Kashcheev)
- 47b More or less unicolorous, blackish brown species 48
- 48a Relative to temples eyes larger (EL=0.20-0.23 mm, TL=0.08-0.11 mm) [Russian Far East, Japan, Korea, Taiwan, NE-China] *O. vulgaris* (Watanabe & Shibata)

- 48b Relative to temples eyes smaller (EL=0.17-0.21 mm, TL=0.12-0.15 mm)
[USA: "Four Corners" states (=Arizona, Utah, Colorado, New Mexico)]
..... *O. hammondi* sp. nov.
- 49a Eyes more bulging: head width at eyes 7-10% larger than temple width.
Pronotal punctation deep, discrete, but punctures small (about as large as
as average interspaces), interspaces with strong microsculpture, corner
between arms of anchor gently impressed [Japan] *O. itoi* sp. nov.
- 49b Eyes flatter: head width at eyes 2-4% larger than temple width. Pronotal
punctation more coarse (yet punctures about as large as as average inter-
spaces), microsculpture less dominating; corner between arms of anchor
more impressed [Japan] *O. loebli* sp. nov.
- 50a (The male of this species is unknown.) Eyes exceptionally large and
bulging: ratio of shortest distance between the eyes' inner margin (at
about 1/3 eye length) and total width of the head (with the eyes) less than
0.7. Temples reduced (Fig. 463) [N-India: Darjeeling] . *O. proximus* (Cameron)
- 50b Eyes either smaller or flatter: ratio of shortest distance between the eyes'
inner margin (at about 1/3 eye length) and total width of the head (with
the eyes) more than 0.7 51
- 51a Extra lobe of paramere large but apically membranous (Figs 443, 452,
455,459) 52
- 51b Extra lobe of paramere either small or larger but distinct-edged 55
- 52a At least elytra somewhat reddish 53
- 52b Whole body more or less unicolorous brownish black 54
- 53a Eyes flatter, rather fitting in the rounded sideline of head (Fig. 448).
Pronotum less transverse, more convex dorsally, anterior corners
strongly bending in ventral direction, making marginal bead invisible
from dorsal view (Fig. 447) [Nepal, N-India, China: Yunnan, Gansu] . .
..... *O. basicornis* (Cameron)
- 53b Eyes more bulging (Fig. 432). Pronotum more transverse, wide marginal
bead visible in rounded anterior corners (Fig. 431) [China: Hubei,
?Nepal] *O. uhligi* sp. nov.
- 54a Middle antennomeres more elongate. Puncture diameters on pronotum
larger, on average nearing interspaces; interspaces covered with more
flattened, colliculate microsculpture. Elytral punctation more dense,
interspaces on average just a little larger than diameters (approx. 22
punctures per elytron width) [Kashmir, N-India, Nepal]
..... *O. monticola* (Cameron)
- 54b Middle antennomeres not much longer than wide. Puncture diameters on
pronotum smaller, interspaces greatly vary in size, but generally much
larger than punctures; interspaces covered with more acinose micro-
sculpture, puncturation more shallow and indistinct. Elytral punctation
more sparse, interspaces not much larger than puncture diameters
(approx. 17 punctures per elytron width) [Kashmir, Nepal]
..... *O. kashmiricus* (Cameron)
- 55a Parameres with well separated secondary lobe 56

- 55b Secondary lobe of paramere not well separated, either appearing as a broadening or a small tubercle 59
- 56a Secondary lobe of paramere broad and strong, broader than main branch of paramere after bifurcation (Figs 468, 473) 57
- 56b Secondary lobe of paramere slender, not broader than main branch of paramere after bifurcation 58
- 57a Secondary lobe of paramere exceeding half the length of paramere from bifurcation (Fig. 472) [N-India, Nepal, China: Sichuan] *O. ritae* sp. nov.
- 57b Secondary lobe of paramere shorter than half the length of paramere from bifurcation (Fig. 467) [Pakistan, Kashmir, N-India, Nepal, China: Sichuan, Yunnan] *O. tichomirovae* sp. nov.
- 58a Secondary lobe (SP) of paramere with more uniform width, slightly more elongate (Fig. 486). Body unicolorous black [Nepal, China: Yunnan] *O. kleebergi* sp. nov.
- 58b Secondary lobe (SP) of paramere somewhat broader at base, slightly less elongate (Fig. 483). Elytra reddish [China: Sichuan] *O. merkli* sp. nov.
- 59a Paramere only with a conspicuous broadening around middle on the inner side 60
- 59b Secondary lobe of paramere very short, appearing more or less as a tubercle on the inner side 61
- 60a Secondary lobe (SP) of paramere with more uniform width, slightly more elongate (Fig. 498). Body unicolorous black [Nepal, China: Sichuan, Shaanxi, Hubei] *O. zerchei* sp. nov.
- 60b Secondary lobe (SP) of paramere somewhat broader at base, slightly less elongate (Fig. 501). Elytra reddish [China: Yunnan, Shaanxi, Hubei] *O. assingi* sp. nov.
- 61a Secondary lobe of paramere appearing as a very short appendage on inner side directed towards paramere apex (Fig. 489). Very large species (PW>0.70 mm) [China: Sichuan] *O. szarukani* sp. nov.
- 61b Inner margin of paramere with a rounded tubercle (Fig. 504). Smaller species (PW<0.70 mm) [N-India] *O. indicus* sp. nov.

Ochtheophilus Mulsant & Rey, 1856

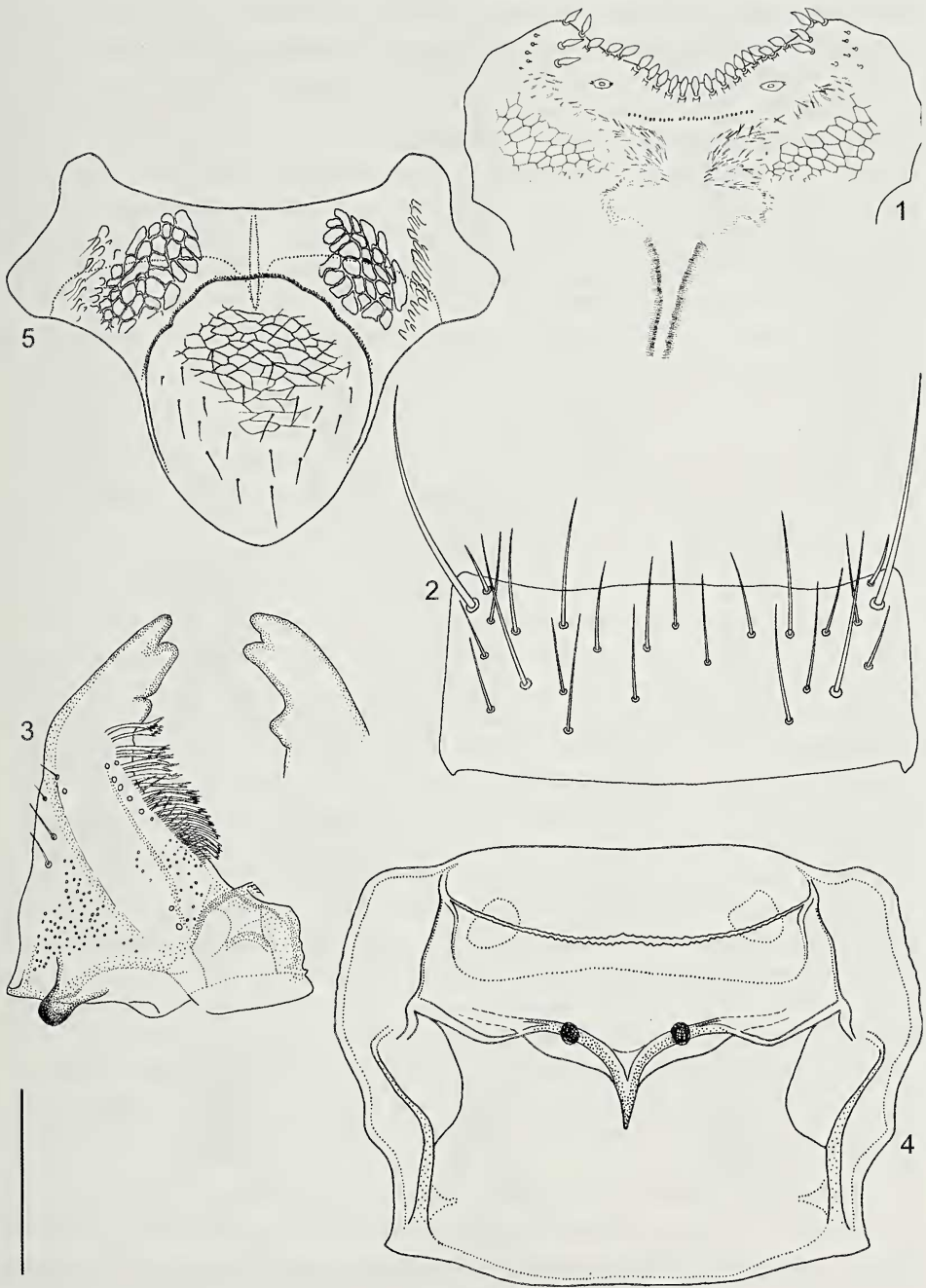
Ochtheophilus Mulsant & Rey, 1856a: 1; type species: *Ochtheophilus flexuosus* Mulsant & Rey, 1856 (by monotypy). – *Ancyrophorus* Kraatz, 1857: 886; type species: *Trogophloeus omalinus* Erichson, 1840 (subsequent designation by Thomson, 1859: 44). – *Misancyrus* des Gozis, 1886: 15; type species: *Ancyrophorus emarginatus* Fauvel, 1871 (original designation). – *Psilotrichus* Luze, 1904: 69; type species: *Psilotrichus elegans* Luze, 1904 (by monotypy). – *Ochtheophilinus* Eichelbaum, 1915: 104; type species: *Ochtheophilus flexuosus* Mulsant & Rey, 1856 (objective synonym of *Ochtheophilus*). – *Stictancyrus* Scheerpeltz, 1950: 65; type species: *Trogophloeus flexuosus* Fairmaire & Laboulbène, 1856 [syn. of *Ochtheophilus flexuosus* Mulsant & Rey, 1856] (original designation).

DIAGNOSIS: *Ochtheophilus* can be recognized by a characteristic “anchor-shaped” ridge on the pronotum – in most species well-formed, in a small minority partial. Terminal segment of maxillary palpus quite large and elongate with asymmetrically swollen base, the filamentous sensory structures lay over the swollen side

(Figs 32-33). Elytral setation rather short and in most species quite regular. Can be confused (by superficially similar pronotal sculpture) with some *Thinodromus* species but those either occur in South America or their abdomen posteriorly narrowing more strongly, tarsi shorter (basal three articles compressed); also the formation of tergite VIII in *Thinodromus* is different, as well as the terminal segment of maxillary palpus.

DESCRIPTION: Small to medium-sized (2.0-5.3 mm), usually dark brown to black (Figs 481-482), but some species at least partially reddish (Figs 429-430) or peculiarly light coloured, pale brownish-yellowish (Figs 47-48). Body somewhat depressed, moderately densely to densely pubescent, setae regularly spaced and sized in the majority of species. Temples usually moderately well developed, not differing between sexes (no macrocephaly). Head usually smaller (and certainly less broad) than pronotum, latter gently to moderately transverse, posterior corners well-formed, obtuse-angled, but sometimes nearly right-angled. Elytra parallel-sided (only slightly broadening posteriorly), shoulders usually well-developed. Setation in most species regularly spaced and sized, much more so than on head and pronotum. Sutural and outer posterior corners narrowly rounded (except in a few species also with dense, irregularly sized and spaced elytral setation). Abdominal segments moderately shiny with microsculpture and scattered punctation not too conspicuous, only a few species with longer setae on tergites.

Head. Clypeus well-developed, epistomal sulcus (mostly a shinier, transversally sculptured line) present. Dorsum of head with varying strength and density of punctation, usually moderately setose. Supraantennal prominence well developed and separated from vertex by two elongate impressions. Eyes well developed, in the majority of species longer than temples, head at eyes usually wider than at temples. Eye setation generally short (and therefore inconspicuous) but sometimes dense. Gular sutures (Fig. 30) confluent at least anteriorly. Dorsum of head usually with a shallow medial/longitudinal impression connecting epistomal and occipital impressions. Punctation generally more sparse towards middle of vertex, lateral areas (especially near eyes) with microsculpture intermingling with punctation. Base of head slightly to strongly constricted to form well-defined/broad neck, but without distinct occipital groove (obsolete; evident as broad, arcuate depression). Antenna slightly incrassate apically, length of segment 3 almost equal to that of article 1 (the longest), segment 2 somewhat shorter, basal disc (ridge) from antennomere 4 onwards quite prominent, all articles with similar sculpture, setation becoming stronger from article 4 onwards. Antennal modification in most species insignificant, but in a number of taxa article 6 unproportionally narrower and shorter than its neighbours (antennomeres 5 and 7) (Figs 353-357); another assemblage of species with a mostly rather conspicuous asymmetrical swelling on one side of antennomere 7 (and in a much smaller extent on article 8) (Figs 70, 95, 117). Compound eyes vary in size, but in most cases prominent, with temples developed (only a few exceptional species with more or less truncate temples) and gently bulging. Labrum undivided, median portion concave but without incisions. Lateral portions bearing large membranous lobes. Epipharynx as in Fig. 1. Mandible (Fig. 3) rather short with somewhat bifurcate apex and one additional, blunt tooth. Prosthema extending from inner edge to at least 2/3 of the length of mandible



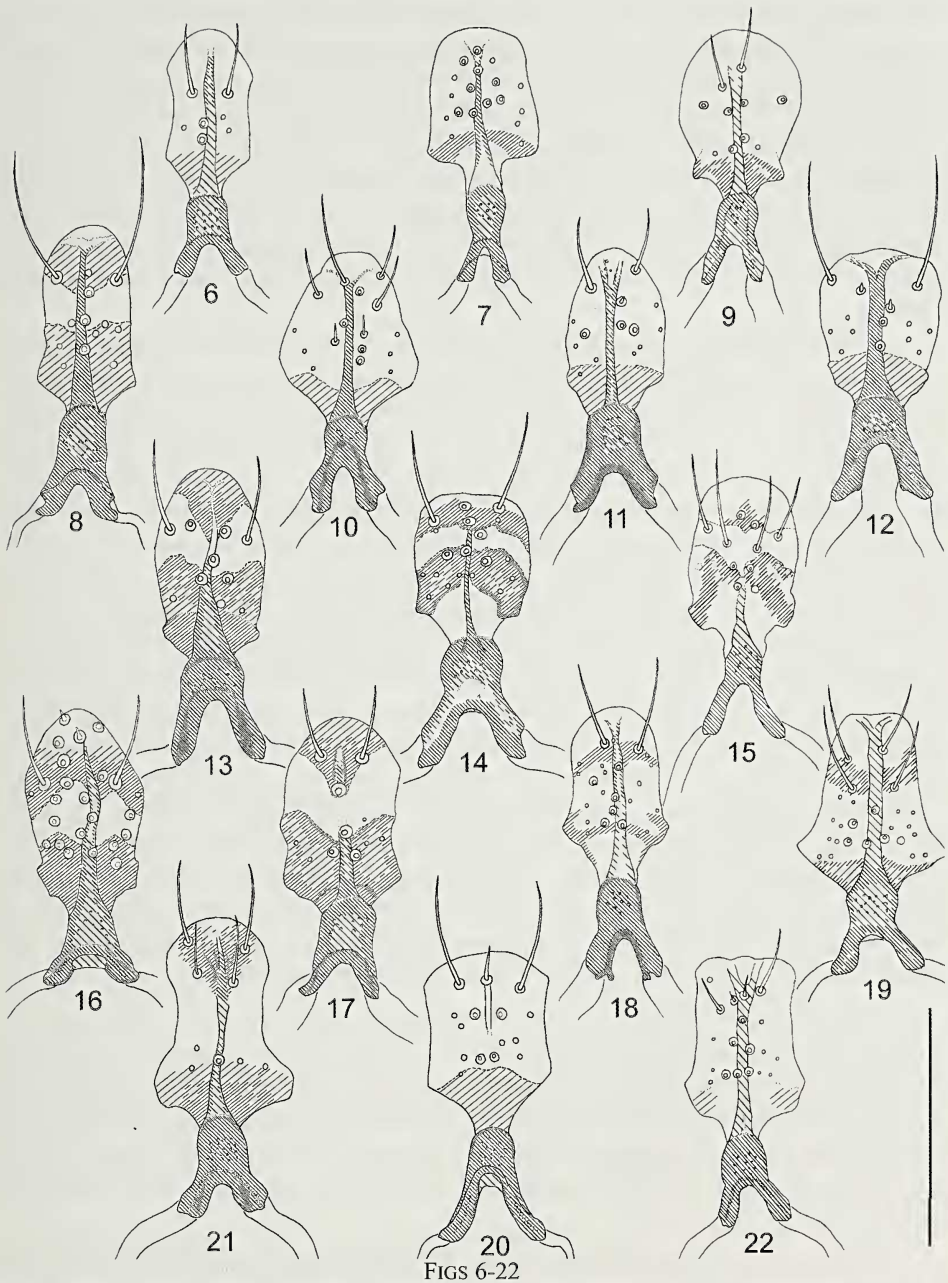
FIGS 1-5

Ochtheophilus flexuosus Mulsant & Rey; epipharynx (1), mentum (2), left mandible and apex of right (3), prothorax, ventral view (4), scutellum, dorsal view (5). Scale bar = 0.1 mm for 1-2, 0.12 mm for 5, 0.2 mm for 3, 0.27 mm for 4.

itself, composed of rather long and weak processes. In maxilla, cardo medium sized, triangular, lacinia enlarged with lobe, galea relatively smaller, both with dense setation on apex. Maxillary palpus (Figs 32-33) with first segment very small and ringlike, second rather large with apex broadening, third shorter but wide and less broadening apically and fourth segment almost as broad at base as apex of previous; this terminal segment is of characteristic shape, base bulbous and asymmetrically swollen with sensory filaments on that side (these "filaments" or "fingers" can extend out of the groove in which they are "housed"), apex (Fig. 31) elongate, length similar to that of second article. In labium (Fig. 30 and Fig. 36 in Makranczy, 2006), mentum (Fig. 2) transverse rectangular. Hypopharynx (Fig. 37 in Makranczy, 2006) laterally with row of bulbous setae, none at midline, without coriaceous field, a few coronal pegs (sensillum basiconicum) mostly around midline and near apical edge; with a platelike armature visible in transparent preparations, slightly differently structured in different species groups (Figs 6-22). Labial palps three segmented, second somewhat longer than first and third, second less wide than first, last rather slender. Third segment with a couple of very short sensillae on tip. All segments with coronal pegs at apex.

Thorax. Prosternal process pointed. Scutellum (Fig. 5) with very scattered and short pubescence. Hypomera exposing prothorantins. Pronotum moderately transverse, usually with broadly rounded anterior corners and convex anterior halves of sides, posterior halves often gently concave (may involve multiple very shallow concavities) and posterior corner well-formed, moderately sharp, slightly obtuse-angled to right-angled. Sides and posterior edge with marginal bead, traces of it often observable on anterior margin (Figs 90, 252), at anterior corners sometimes invisible (in dorsal view) due to corners bending down strongly (Figs 447, 509). Metendosternite (Fig. 23) "gingko-leaf shaped", consisting of a basal stalk, furcal arms poorly developed. – Legs. Tibia (Fig. 379) with mid-tibial spur(s) and spines or rows of stiff setae. Tarsal segmentation 5-5-5 (Fig. 34) with no pseudosegment, basal 3 articles somewhat compressed but still distinct. Ventral setae modified to form tarsal lobes, last tarsomere usually only with sparse setae, but in some species rather setose. – Elytra. Slight marginal bead along parallel elytral suture, epipleural ridge present, elytra rather parallel-sided, very slightly widening posteriorly, usually narrowly rounded both in outer posterior and sutural corners, only in a few species broadly rounded (mainly in sutural corners). Setation rather short, moderately dense and regularly spaced (in a few species more irregular and dense, but not much longer). Elytral apex near sutural corners with a few peculiarly longer setae (Figs 148, 195, 411) and narrow membranous lobe, mostly confined to near outer corners (Figs 170, 253), rarely extending along entire apical margin (Figs 67, 91).

Abdomen. Abdomen with two pairs of laterosclerites (Figs 25, 27). Intersegmental membrane without brickwall pattern. Second sternite fully developed (Figs 24, 26), a pair of slender (transversal) plate-pieces of what may be thought as remnants of first sternite embedded in concavities on basal edge (Figs 25, 27). Tergal basolateral ridges absent, all sternites without carinae. Fimbriate edge (palisade fringe) on tergite VII either modified medially (see under species treatments) (Figs 64, 65, 451, 466, 480, 497, 513) or unmodified (Figs 223, 386-387). Sternites VII-VIII otherwise lacking peculiar modifications in both sexes, even sternite VIII with very gentle



FIGS 6-22

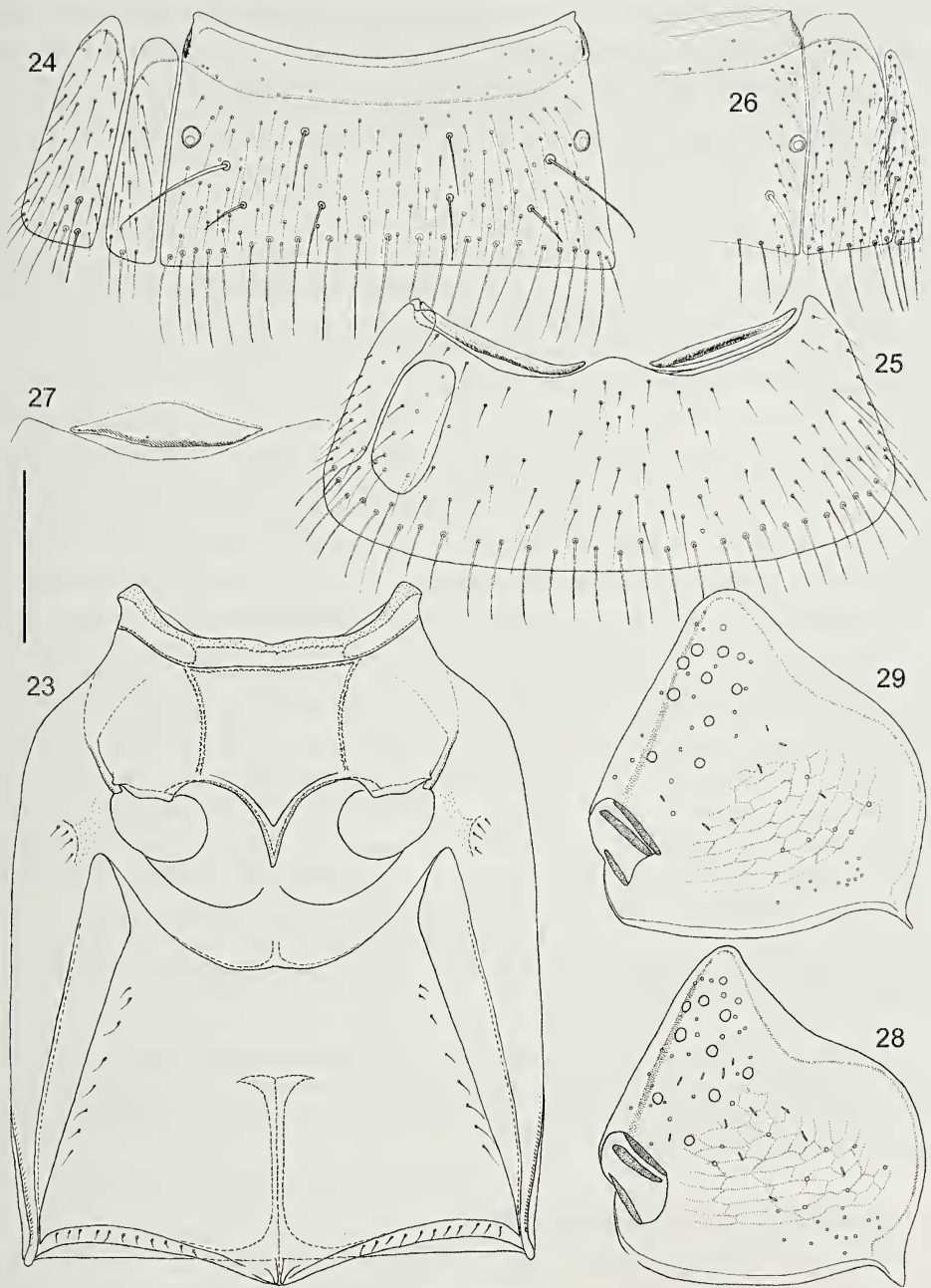
Platelike armature in hypopharynx. *Ochtheophilus filum* (Fauvel) (6), *O. emarginatus* (Fauvel) (7), *O. californicus* sp. n. (8), *O. laevis* (Watanabe & Shibata) (9), *O. biimpressus* (Mäklin) (10), *O. brachypterus* (Jeannel & Jarrige) (11), *O. solodovnikovi* Gildenkov (12), *O. ashei* sp. n. (13), *O. kirschenblatti* sp. n. (14), *O. nepalensis* (Scheerpeltz) (15), *O. schuelkei* sp. n. (16), *O. szeli* sp. n. (17), *O. nigerrimus* (Cameron) (18), *O. hammondi* sp. n. (19), *O. wrasei* sp. n. (20), *O. merkli* sp. n. (21), *O. szarukani* sp. n. (22). Scale bar = 0.1 mm for 6, 8, 13-14, 16-17, 0.09 mm for 7, 10-11, 15, 0.065 mm for 9, 12, 18-22.

difference between sexes. Tergite VIII, however, often with characteristic shape providing major diagnostic trait for distinguishing a large portion of species. In males tergite IX paired, ventral sides of anterolateral margins projected, elongate (ventral strut). Sternite IX present as unpaired plate, elongate, apical edge broadly rounded, moderately setose, sides convergent to base. Tergite X unpaired in both sexes, slightly pentagonal in shape, but apex broadly rounded, this plate often strongly modified and shows strong sexual dimorphism. In females tergite IX paired, similar to those in males but ventral strut completely absent, Sternite IX (genital appendages) consisting of a pair of coxites, valvifers and tiny, moderately elongate styli, rather similar in all species.

Male genitalia. Aedeagus (Fig. 37) median lobe bulb-like, moderately sclerotized internal structures (unpaired) with characteristic shape present in majority of species. Inner sclerite (Fig. 37) usually consisting of one distinct piece (IS), but in some species a second, much smaller and weaker sclerotized, more membranous second piece (SS) observable and surrounded by muscles – in everted state of internal sac inner sclerite is more exposed (Fig. 36). Apical opening (AP) simple, moderately elongate (only in a few species very elongate, e.g. Fig. 472). Median face (Fig. 35) membranous, striated band (SB) can also be elongate or short, "croissant-like". Parameres (PR) not wrapping, with a discrete arm (basally). Apical portion of parameres sometimes strongly modified, this can involve an extra but discrete-edged lobe, a membranous lobe or (in one species) a membranous edge turning from inner facies to outer (Fig. 135). Parameres without setae, apex of paramere (PA) sometimes peculiarly broadened (e.g. Fig. 467). Basal orifice (BO) usually well observable, quite large with discrete edge, in corners next to paramere joint (AT) with lobes (OA) either smaller, inconspicuous (e.g. Fig. 49) or quite remarkably developed (e.g. Fig. 467). Basal part of median lobe shell (MS), rather weakly sclerotized, usually rounded. Aedeagus without visible pump and flagellum. – Female genitalia. Spermatheca (Figs 366, 420, 444, 456, 469, 490) weakly sclerotized, so easily unnoticed even in embedded preparation. Receptacle elongate bulb-like, spermathecal gland small and spherical, connected to base of receptacle by long, earthwormlike tube.

DIVERSITY: The genus in the current account includes 62 described species, with a few remaining undescribed (due to insufficient or unsuitable material). Therefore it is a good estimation that when fully known the number of species could go up to 70-80, and most still undescribed species are expected from the Himalaya and mountainous China. Forest destruction and exploitative use of running waters in these latter areas, however, endanger habitats and could prevent discovery of the remaining species.

DISTRIBUTION: *Ochtheophilus* is a Holarctic genus, with the greatest diversity in the Mediterranean area and the Himalayas plus mountainous southern China. Most species occur in montane or premontane areas, a few in lowlands. They are mostly confined to stream- and riverbanks, the majority of species are expected to be rather widespread, all are fully winged, so as long as suitable habitats are not completely destroyed they are not particularly endangered. Exceptions are some of the smallest species that formerly inhabited lowland rivers with predominantly sandy banks



FIGS 23-29

(23) *Ochtheophilus flexuosus* Mulsant & Rey; pterothoracic sterna, without mesocoxae and metacoxae. (24-25) *O. filum* (Fauvel); tergite III plus laterosclerites (24), sternite II, laterosclerite and tergite I, dorsal view (25). (26-27) *O. emarginatus* (Fauvel); laterosclerites of tergite III (26), sternite I (27). (28-29) Female tergite IX; *O. praepositus* Mulsant & Rey (28), *O. rosenhaueri* (Kiesenwetter) (29), posterior apex pointing to top. Scale bar = 0.1 mm for 28-29, 0.135 mm for 24-25, 0.2 mm for 26-27, 0.33 mm for 23.

(as opposed to gravel) and are feared as being extinct as uncollected for the last 100 years. *Ochtheophilus* was also found on Canary Islands once, a single male specimen collected by Rafael García Becerra in the northeast of La Palma (Marcos y Cordero *+28.75/-17.78*, 17.VIII.1999), but unfortunately never found again (despite repeated visit of the locality) and based on such insufficient material no new species description can be made.

NATURAL HISTORY: Both larvae and adults are highly hygrophilous and require wet habitats, be it sandy or gravelly banks of rivers and streams (but always running water), or soaking wet moss on rocks. Some species are facultatively cavernicolous. The species which is relatively often found in caves is *O. aureus*, but occasionally others (*O. angustatus*, *O. brachypterus*, *O. tatricus*) are reported, too. As far as it is presently suspected, they feed on algae or various other small particles of freshwater plant material. Almost nothing is known about the life cycle of *Ochtheophilus*. With the exception of *O. aureus*, which was found in caves most often, and was collected all year round, most specimens were obtained from the spring to autumn months, with the high elevation collections peaking in mid-summer. Specimens are rather rarely recorded to fly to light – although all have developed wings and are capable of flight. This could be partly due to the fact that most light traps are not placed in the vicinity of streams, and it could be that specimens do not fly long distances. On the other hand, a number of specimens were collected by car-nets, indicating that they are frequent fliers. One good example of the varied habitats where adults of *Ochtheophilus* can be found, is *O. brachypterus*, described from a cave, collected by the present author from moss (High Tatry, 1600 m), gravel-bank of mountain stream (Retezat Mts., 1600 m), but also recorded from car-nets (Kärnten). Almost the same can be said of *O. tatricus*, and possibly a number of others. Larvae were first mentioned by Ganglbauer (1895), then a tentatively attributed specimen was included in a key to genera by Kasule (1968). Proper larval description of *O. aureus* was published by Bourne (1975) and larva of the same species was described again by Bruge (2007) without reference to the earlier description. Defensive gland was mentioned in Dettner (1987). Although the genus *Ochtheophilus* is presumably an ancient group within Oxytelinae, no fossils or subfossils are known to the author.

SPECIES GROUPS: Below a conspectus of the herein followed system is given, in order to provide an easier overview. After the valid species names the page number of the respective heading (in bold), the primary habitus illustration(s) and the aedeagus figure (in italics) are listed.

I. *Ochtheophilus aurorans* species group

- | | |
|--|--|
| <i>O. aurorans</i> (Peyerimhoff, 1914) | p. 482 , Figs 47, 514 (hab.), <i>Fig. 39</i> (aed.) |
| <i>O. scheerpeltzi</i> (Fagel, 1951) | p. 484 , Figs 48, 515 (hab.), <i>Fig. 43</i> (aed.) |

II. *Ochtheophilus angustatus* species group

- | | |
|--|--|
| <i>O. angustatus</i> (Erichson, 1840) | p. 488 , Fig. 516 (hab.), <i>Fig. 54</i> (aed.) |
| <i>O. carnicus</i> (Scheerpeltz, 1950) | p. 492 , Fig. 518 (hab.), <i>Fig. 49</i> (aed.) |
| <i>O. filum</i> (Fauvel, 1875) | p. 496 , Fig. 517 (hab.), <i>Fig. 59</i> (aed.) |

III. *Ochtheophilus emarginatus* species group

- O. davidi* sp. n. p. 500, Figs 169-170 (hab.), Fig. 71 (aed.)
O. emarginatus (Fauvel, 1871) p. 504, Fig. 519 (hab.), Fig. 74 (aed.)
O. japonicus (Watanabe & Shibata, 1961) p. 506, Fig. 521 (hab.), Fig. 79 (aed.)
O. sericinus (Solsky, 1874) p. 510, Fig. 520 (hab.), Fig. 96 (aed.)
 = *elegans* Luze, 1904, = *kerzhneri* Kashcheev, 1989, = *gvosdevi* Kashcheev, 1999
O. tibetanus sp. n. p. 514, Figs 171-172 (hab.), Fig. 101 (aed.)

IV. *Ochtheophilus aureus* species group

- O. aureus* (Fauvel, 1871) p. 516, Fig. 522 (hab.), Fig. 106 (aed.)
 = *oblitus* Mulsant & Rey, 1878, = *ruficornis* Reitter, 1909, = *lucifugus* Fagel, 1951
O. californicus sp. n. p. 520, Figs 194-195 (hab.), Fig. 130 (aed.)

V. *Ochtheophilus laevis* species group

- O. laevis* (Watanabe & Shibata, 1961) p. 524, Fig. 523 (hab.), Fig. 135 (aed.)

VI. *Ochtheophilus praepositus* species group

- O. angustior* (Bernhauer, 1943) p. 526, Fig. 224 (hab.), Fig. 239 (aed.)
O. biimpressus (Mäklin, 1852) p. 529, Figs 429, 524 (hab.), Fig. 154 (aed.)
O. brachypterus (Jeannel & Jarrige, 1949) p. 530, Fig. 532 (hab.), Fig. 189 (aed.)
O. columbiensis (Hatch, 1957) p. 533, Fig. 531 (hab.), Fig. 234 (aed.)
O. flexuosus Mulsant & Rey, 1856 p. 536, Fig. 525 (hab.), Fig. 140 (aed.)
O. legrosi (Jarrige, 1949) p. 538, Fig. 534 (hab.), Fig. 179 (aed.)
O. lenkoranus (Scheerpeltz, 1950) p. 540, Fig. 526 (hab.), Fig. 164 (aed.)
 = *swaneticus* Yablokov-Khnzorian, 1974
O. planus (LeConte, 1861) p. 542, Fig. 529 (hab.), Fig. 217 (aed.)
 = *curtipennis* Eppelsheim, 1893
O. praepositus Mulsant & Rey, 1878 p. 545, Fig. 528 (hab.), Fig. 207 (aed.)
 = *ruteri* Jarrige, 1949, = *grigolettoi* Fagel, 1951
O. rosenhaueri (Kiesenwetter, 1850) p. 548, Fig. 527 (hab.), Fig. 212 (aed.)
 = *longipennis* Fairmaire & Laboulbène, 1856, = *jailensis* Scheerpeltz, 1950, = *gracilis* Fagel, 1951, = *corsicus* Fagel, 1956
O. solodovnikovi Gildenkov, 2000 p. 550, Fig. 535 (hab.), Fig. 159 (aed.)
O. tatricus (Smetana, 1967) p. 553, Fig. 533 (hab.), Fig. 184 (aed.)
O. wunderlei sp. n. p. 556, Fig. 530 (hab.), Fig. 244 (aed.)

VII. *Ochtheophilus omalinus* species group

- O. andalusiacus* (Fagel, 1957) p. 557, Fig. 540 (hab.), Fig. 309 (aed.)
 = *rivularis* Smetana, 1967
O. ashei sp. n. p. 560, Fig. 544 (hab.), Fig. 314 (aed.)
O. enigmaticus sp. n. p. 562, Figs 326-327 (hab.), Fig. 365 (aed.)
O. forticornis (Hochhuth, 1860) p. 564, Fig. 538 (hab.), Fig. 338 (aed.)
 = *antennatus* Watanabe & Shibata, 1961, = *confinis* Smetana, 1968
O. gusarovi sp. n. p. 566, Fig. 545 (hab.), Fig. 286 (aed.)
O. incognitus sp. n. p. 569, Fig. 537 (hab.), Fig. 369 (aed.)

- O. kirschenblatti* sp. n. p. 570, Fig. 536 (hab.), Fig. 262 (aed.)
O. nepalensis (Scheerpeltz, 1976) p. 573, Fig. 548 (hab.), Fig. 374 (aed.)
O. nitidus (Cameron, 1924) p. 574, Fig. 547 (hab.), Fig. 319 (aed.)
O. omalinus (Erichson, 1840) p. 577, Fig. 541 (hab.), Fig. 267 (aed.)
 = *parvulus* Eppelsheim, 1878
O. qingyianus sp. n. p. 580, Figs 300-301 (hab.), Fig. 296 (aed.)
O. schuelkei sp. n. p. 582, Fig. 546 (hab.), Fig. 333 (aed.)
O. strandi (Scheerpeltz, 1950) p. 584, Fig. 539 (hab.), Fig. 343 (aed.)
O. szeli sp. n. p. 586, Fig. 542 (hab.), Fig. 272 (aed.)
O. venustulus (Rosenhauer, 1856) p. 589, Fig. 543 (hab.), Fig. 291 (aed.)
 = *mediterraneus* Scheerpeltz, 1950

VIII. *Ochtheophilus vulgaris* species group

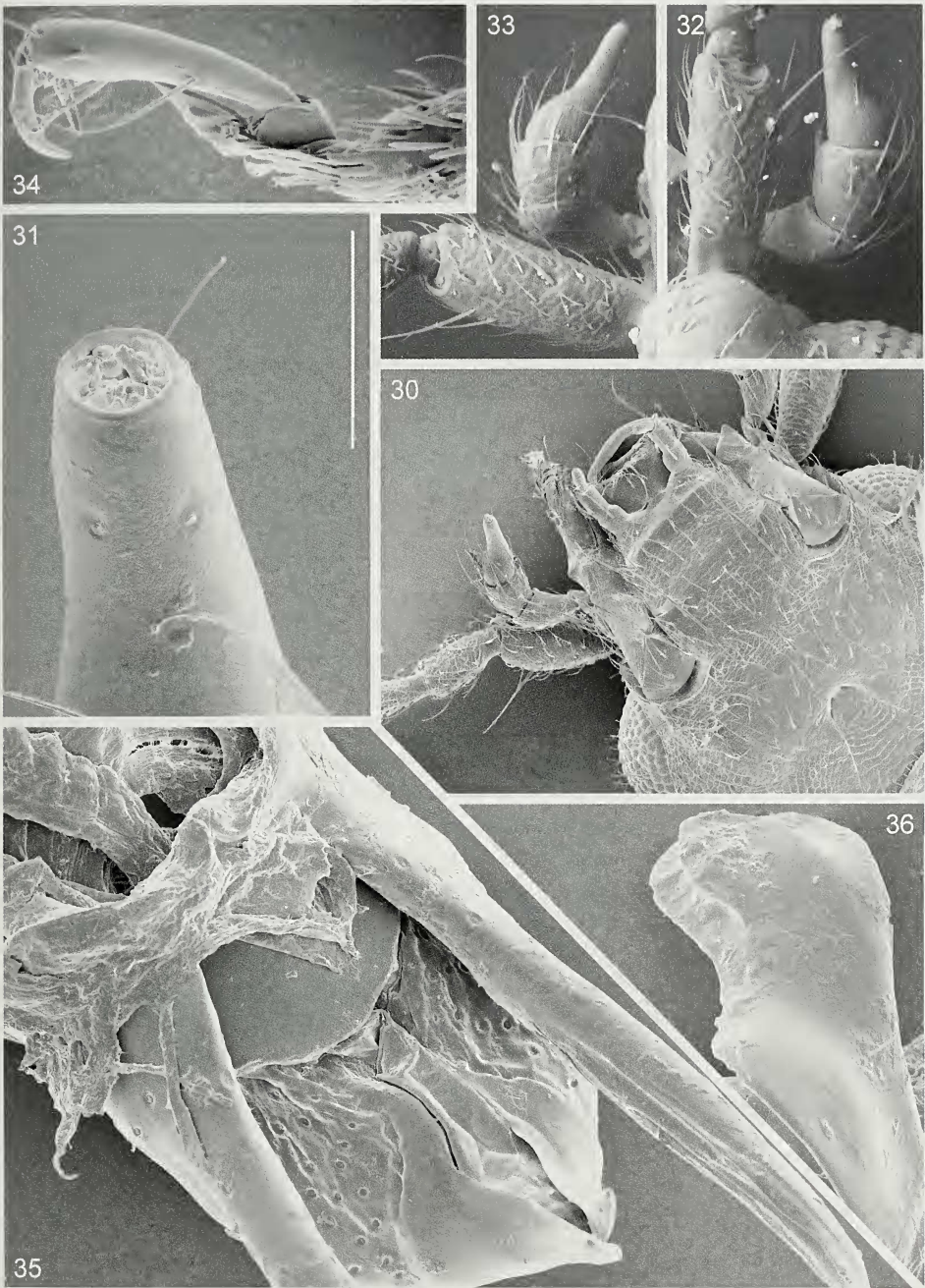
- O. championi* (Bernhauer, 1926) p. 592, Fig. 553 (hab.), Fig. 398 (aed.)
O. hammondi sp. n. p. 594, Fig. 549 (hab.), Fig. 403 (aed.)
O. itoi sp. n. p. 597, Fig. 551 (hab.), Fig. 416 (aed.)
O. ketmenicus (Kashcheev, 1999) p. 598, Fig. 550 (hab.), Fig. 403 (aed.)
O. loebli sp. n. p. 601, Fig. 552 (hab.), Fig. 419 (aed.)
O. nigerrimus (Cameron, 1941) p. 604, Fig. 554 (hab.), Fig. 395 (aed.)
O. vulgaris (Watanabe & Shibata, 1961) p. 605, Fig. 555 (hab.), Fig. 437 (aed.)
 = *masatakai* Watanabe, 2007

IX. *Ochtheophilus wrasei* species group

- O. wrasei* sp. n. p. 608, Fig. 428 (hab.), Fig. 440 (aed.)

X. *Ochtheophilus monticola* species group

- O. assingi* sp. n. p. 610, Fig. 430 (hab.), Fig. 501 (aed.)
O. basicornis (Cameron, 1941) p. 614, Fig. 557 (hab.), Fig. 452 (aed.)
O. indicus sp. n. p. 617, Figs 493, 496 (hab.), Fig. 504 (aed.)
O. kashmiricus (Cameron, 1941) p. 618, Figs 476, 479 (hab.), Fig. 459 (aed.)
O. kleebergi sp. n. p. 620, Figs 509, 512 (hab.), Fig. 486 (aed.)
O. merkli sp. n. p. 622, Fig. 561 (hab.), Fig. 483 (aed.)
O. monticola (Cameron, 1924) p. 626, Fig. 556 (hab.), Fig. 455 (aed.)
O. proximus (Cameron, 1941) p. 630, Fig. 558 (hab.)
O. ritae sp. n. p. 634, Fig. 481 (hab.), Fig. 472 (aed.)
O. szarukani sp. n. p. 636, Fig. 560 (hab.), Fig. 489 (aed.)
O. tichomirovae sp. n. p. 640, Fig. 482 (hab.), Fig. 467 (aed.)
O. uhligi sp. n. p. 644, Figs 431, 434 (hab.), Fig. 443 (aed.)
O. zerchei sp. n. p. 645, Fig. 559 (hab.), Fig. 498 (aed.)



FIGS 30-36

(30-31) *Ochtheophilus praepositus* Mulsant & Rey; head, ventral view (30), apex of maxillary palpus, coronal pegs (31). (32) *O. angustior* (Bernhauer); maxillary palpus. (33) *O. szeli* sp. n.; maxillary palpus. (34) *O. omalinus* (Erichson); protarsus. (35-36) *O. strandi* (Scheerpeltz); aedeagus frontal view with openings (35), apex of inner sclerite (36). All SEM. Scale bar = 0.03 mm for 31, 36, 0.05 mm for 35, 0.11 mm for 34, 0.15 mm for 32-33, 0.3 mm for 30.

I. *Ochtheophilus aurorans* species group

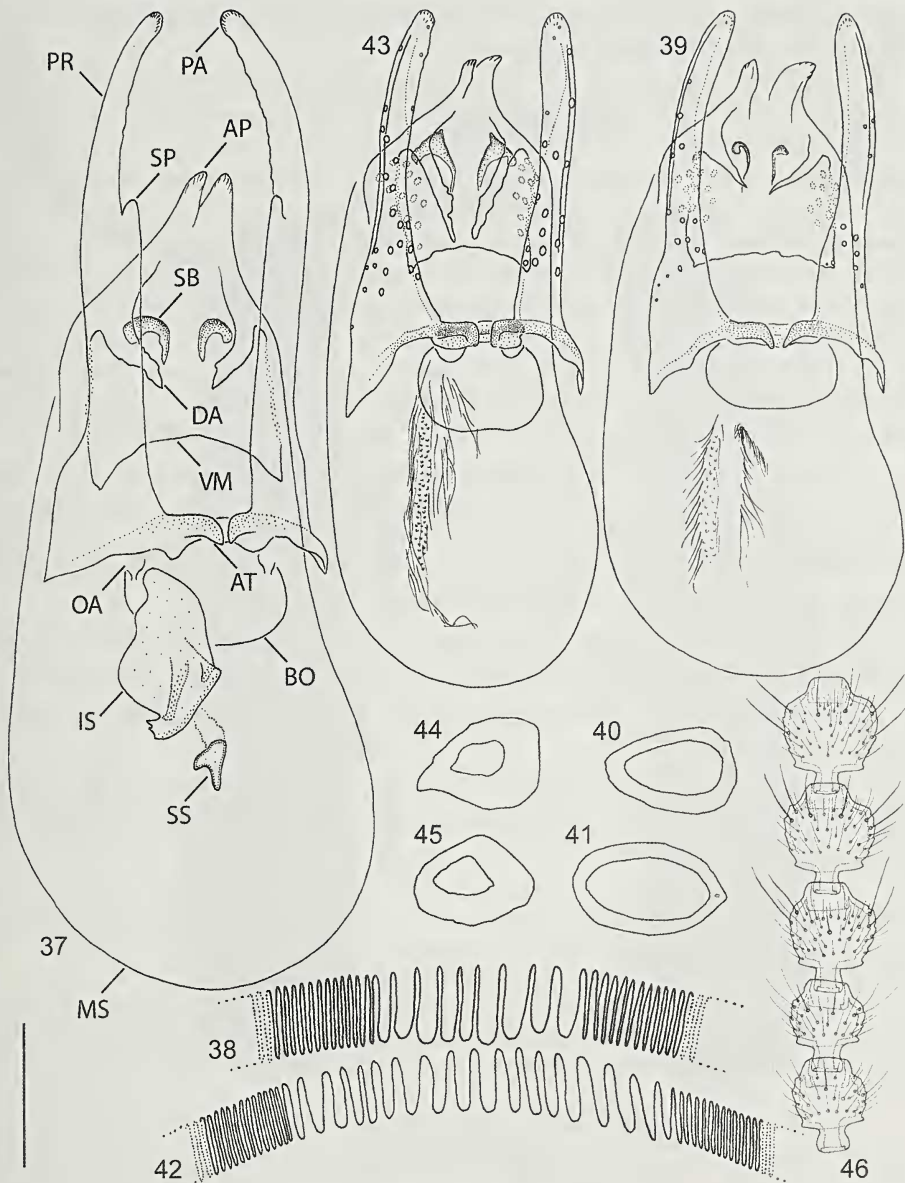
Ochtheophilus aurorans (Peyerimhoff, 1914) Figs 39-41, 47, 64, 84, 90, 91, 111, 514
Ancyrophorus aurorans Peyerimhoff, 1914: 249. – Scheerpeltz, 1950: 65. – Fagel, 1951b: 6.
Ochtheophilus aurorans (Peyerimhoff). – Herman, 1970: 384.

TYPE MATERIAL EXAMINED: *Ancyrophorus aurorans* – LECTOTYPE (♂, here designated): “[ALGERIA:] Oued Biskra [$+34.85/+05.73^*$]; février 1914; R. de Borde \ *Ancyrophorus*; *aurorans*; Peyerimhoff; -Type- \ Type [curator label] \ Museum Paris; Coll. P. de Peyerimhoff; 1950 \ Lectotypus; *Ancyrophorus*; *aurorans* Peyerimhoff; [on the back] des. Makranczy, 1999 \ *Ochtheophilus*; *aurorans* Peyerimhoff; det. Makranczy, 1999” (MNHP).

OTHER MATERIAL: **MOROCCO**: Tafilalet, Beni Tadjit, Khangnet, Oued Grou [$+32.24/-03.47^*$], 5.IV.1938, leg. P. de Peyerimhoff, coll. Peyerimhoff, MNHP (1 ♀), MHNG (1 ♀).

REDESCRIPTION: Habitus as in Fig. 47, forebody as in Fig. 514. Measurements (n=3): HW = 0.41 (0.40-0.43); TW = 0.41 (0.40-0.43); PW = 0.45 (0.44-0.47); SW = 0.50 (0.49-0.50); AW = 0.56 (0.55-0.56); HL = 0.34 (0.32-0.36); EL = 0.10 (0.08-0.11); TL = 0.12 (0.10-0.14); PL = 0.38 (0.37-0.39); SL = 0.63 (0.62-0.64); SC = 0.56 (0.53-0.58); FB = 1.36 (1.30-1.40); BL = 2.46 (2.29-2.60) mm. Head reddish medium brown with dark brown transversal stripe along epistomal sulcus. Pronotum orangeish medium brown (marginal bead darker), abdomen medium brown with basal ridges marked by darker brown lines. Elytra medium to light brown, sometimes yellowish, darker from scutellar area to shoulders. Legs, mouthparts and antennae orangeish medium brown. Body with moderate lustre in spite of light body colour, head and elytra shinier. Pubescence rather sparse and uniformly short (regularly spaced) on elytra, longer but finer on head and pronotum, only abdomen with conspicuous and longer setae; a few particularly strong and long setae near pronotal sides and inner anterior corners of eyes. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 111. Clypeus (Fig. 90) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by black transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples very slightly bulging, evenly curved, little longer than eye length. Neck separated by slightly impressed transversal groove, microsculpture of different direction than on head, with transverse cells, no setation. Pronotum with narrow (and slightly darker) marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 almost straight. 'Anchor' partially formed, apart from longitudinal midline two roundish, elevated (shinier) areas near posterior margin and two similar ones on both sides of midline in anterior half of disc; basal arms barely visible. Elytra (Fig. 91) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and



FIGS 37-46

(37) general structure of the aedeagus in *Ochthephilus*: BO = basal orifice; OA = basal orifice appendix; AP = apical opening processes of median lobe; DA = digitiform lamellar appendix of median lobe subapical orifice (on parameral side); IS = (primary) inner sclerite (copulatory piece?); SS = secondary inner sclerite; VM = ventral margin of apical orifice (on parameral side); SB = striated band; AT = attachment (joint) of paramere; MS = median lobe shell; PA = paramere apex; PR = main branch of paramere; SP = secondary lobe of paramere. (38-41) *O. aurorans* (Peyerimhoff); median apex of tergite VII (38), aedeagus (39), female ringstructures (40-41). (42-45) *O. scheerpeltzi* (Fagel); median apex of tergite VII (42), aedeagus (43), female ringstructures (44-45). (46) *O. filum* (Fauvel), antennomeres 5-9. Scale bar = 0.013 mm for 43, 0.02 mm for 44-45, 0.023 mm for 39, 0.03 mm for 40-41, 0.08 mm for 42, 0.1 mm for 38, 46.

regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 84) basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge (Fig. 64) with sinuate (protruding) corners, and broad, moderately deep emargination in between. Corners with sclerotized tubercles in well developed males, also two medial sclerotized tubercles in the concavity. In lesser developed female specimens knobs sometimes entirely missing, margin between inner knobs either gently sinuate or slightly emarginate. Sternite VIII with rounded apical corners, apex in males more or less truncate (straight); similar in females. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 39. Female ringstructures as in Figs 40-41.

COMPARATIVE NOTES: This species shares a similar formation of tergite VIII with *O. scheerpeltzi*, but *O. aurorans* is larger (PW = 0.44-0.47 mm) and antennae more elongate. Other species with similar colouration is the larger *O. angustatus* (PW = 0.47-0.58 mm) separable by a very different tergite VIII and more elongate antenna with asymmetrically swollen antennomere 7 in *O. angustatus*.

NOTE: Peyerimhoff based his description on two specimens, only one of which is found in his collection. The whereabouts of the other specimen remains unknown.

DISTRIBUTION: The species is so far known from Morocco and Algeria, foot of the Atlas Mountains.

BIONOMICS: Only four specimens were ever recorded, with no specific biological information, but from the localities it can be inferred that they were collected at sandy-gravelly riverbanks.

Ochtheophilus scheerpeltzi (Fagel, 1951)

Figs 43-45, 48, 65, 85, 515

Ancyrophorus scheerpeltzi Fagel, 1951b: 5. – Smetana, 1967: 384, 390.

Ochtheophilus scheerpeltzi (Fagel). – Herman, 1970: 385. – Makranczy, 2001: 178.

TYPE MATERIAL EXAMINED: HOLOTYPE: “Brandeis, près Prague, inondations de l’Elbe [*+50.18/+14.18*, leg. Skalitzky (according to description)]” (ISNB). – PARATYPES (2): “Près Brandeis [this specimen is without head and pronotum] (ISNB, 1 ♀) – “Toušeň, leg. Dr. Lokay” (ISNB, 1 ♂).

OTHER MATERIAL: **GERMANY:** Leipzig, Wurzen *+51.38/+12.70*, 18.V.1918, leg. Linke, coll. Scholz, UWCP (1 ♀). — **CZECH REPUBLIC:** Toušeň *+50.11/+14.72*, leg. Dr. Lokay, coll. Lokay, NMPC (1 ♂), MHNG (1), HNHN (2). – Bohemia, Prag, Anschw? *+50.05/+14.41*, 3.V.1896, leg. K. Skalitzky, coll. Neumann, SMFD (1), coll. Skalitzky, NHMW (2). – Brandeis a/Elbe *+50.18/+14.18*, 10.IV.1895, 18. IV.1906 and 18.VI.1894, leg. K. Skalitzky, coll. C. Bosch, SMFD (1 ♀, 1), coll. Skalitzky, NHMW (3), coll. Bernhauer, FMNH (1), HNHN (1). — **CROATIA:** Fužine *+45.32/+14.71*, [leg.? K.] Kelecsényi, coll. Kaufmann, HNHN (1). – Ludbreg *+46.25/+16.62*, leg. Apfelbeck, coll. Eppelsheim, NHMW (1). — **BOSNIA-HERZEGOVINA:** Sarajevo *+43.86/+18.44*, Hochwasser, MZHF (1) HNHN (1 ♀); Ilidza, Miljacka *+43.86/+18.33*, leg. Paganetti, hochwasser, coll. Bernhauer, FMNH (1 ♀, 1). — **BULGARIA:** Rumel., Trnovo-Sejmen [Turnovo-Seymen], Marica *+42.02/+25.85*, 21.III.1909, leg. Rambousek, coll. Roubal, SNMC (1), coll. Rambousek, NMPC (1), SDEI (1). – Mac., Mittl. Struma [Струма], Kresana-Defilé [Кресненско дефиле] *+41.73/+23.16*, 13.VI.1937, leg. J. Breit, coll. Jörgen, NHMB (1).



FIGS 47-48

Habitus of *Ochtheophilus* species. *O. aurorans* (Peyerimhoff) (47), *O. scheerpeltzi* (Fagel), ♂ (48).

REDESCRIPTION: Habitus as in Fig. 48, forebody as in Fig. 515. Measurements ($n=10$): HW = 0.37 (0.35-0.39); TW = 0.36 (0.34-0.38); PW = 0.39 (0.37-0.41); SW = 0.42 (0.40-0.44); AW = 0.49 (0.44-0.55); HL = 0.31 (0.28-0.33); EL = 0.115 (0.10-0.13); TL = 0.10 (0.09-0.11); PL = 0.33 (0.30-0.34); SL = 0.58 (0.53-0.61); SC = 0.54 (0.50-0.58); FB = 1.27 (1.19-1.34); BL = 2.29 (2.07-2.44) mm. Head reddish dark brown with a darker, blackish transversal stripe along epistomal sulcus, pronotum and abdomen somewhat lighter, slightly reddish medium brown (on abdomen basal ridges appearing as darker lines). Elytra even lighter, yellowish medium to light brown, but darker around scutellum and shoulders. Mouthparts, legs and antennae medium to light brown. Body with moderate lustre in spite of light body colour, only elytra shinier. Pubescence rather sparse and uniformly short (regularly spaced) on elytra, longer but finer on head and pronotum, only abdomen with conspicuous and longer setae; a few particularly strong and long setae near pronotal sides and inner anterior corners of eyes. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 48. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by black transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples very slightly bulging, evenly curved, little shorter than eye length. Neck separated by slightly impressed transversal groove, microsculpture of different direction than on head, with transverse cells, no setation. Pronotum with narrow (and slightly darker) marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 almost straight. 'Anchor' partially formed, apart from longitudinal midline two roundish, elevated (shinier) areas near posterior margin and two similar ones on both sides of midline in anterior half of disc; basal arms barely visible. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 85) basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge (Fig. 65) with sinuate (protruding) corners, and broad, moderately deep emargination in between. Corners with sclerotized tubercles in well developed males, also two medial sclerotized tubercles in the concavity. In lesser developed female specimens knobs sometimes entirely missing, margin between inner knobs either gently sinuate or slightly emarginate. Sternite VIII with rounded apical corners, apex in males more or less truncate



FIGS 49-63

(49-53) *Ochtheophilus carnicus* (Scheerpeltz); aedeagus (49), inner sclerites (50-51), female ringstructures (52-53). (54-58) *O. angustatus* (Erichson); aedeagus (54), inner sclerites (55-56), female ringstructures (57-58). (59-63) *O. filum* (Fauvel); aedeagus (59), inner sclerites (60-61), female ringstructures (62-63). Scale bar = 0.06 mm for 52-53, 57-58, 62-63, 0.08 mm for 59-61, 0.1 mm for 54-56, 0.12 mm for 49-51.

(straight); similar in females. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 43. Female ringstructures as in Figs 44-45.

COMPARATIVE NOTES: This species has as similar formation of tergite VIII to that of *O. aurorans*, but *O. scheerpeltzi* is smaller (PW = 0.37-0.41 mm) and antennae less elongate. Other species with similar colouration and size is *O. filum*, separable by a very different apical margin of tergite VIII.

DISTRIBUTION: The species is so far known from Central Europe and the Balkans.

BIONOMICS: Specimens were collected from flood debris. Since this species was not observed in the last 80 years, any information about its bionomics is very superficial. As far as it can be speculated this species – as in the case for *O. angustatus* – inhabits only lowland rivers, but was perhaps always rare. Its relative frequency in historical collections is due to the different collecting habits of the old naturalists like Karl Skalitzky, who re-visited the same sites a great many times and their close attention to life habits enabled them to collect great rarities in numbers. Now these lowland river habitats are extinct in most of Europe, and this kind of collecting attitude has also vanished. For example, the specimen from Károly Kelecsényi was collected at Fužine (historical Croatia) probably circa 1890-1900. That location was destroyed by a pair of large dams built there and the feeding stream having been turned into a canal. The same happened to almost all the larger streams and rivers that could maintain this kind of habitat with a lot of sand deposits.

II. *Ochtheophilus angustatus* species group

***Ochtheophilus angustatus* (Erichson, 1840)** Figs 54-58, 68, 69, 70, 87, 516

Trogophloeus angustatus Erichson, 1840: 803. – Rosenhauer, 1856: 83. – Fairmaire & Laboulbène, 1856: 615.

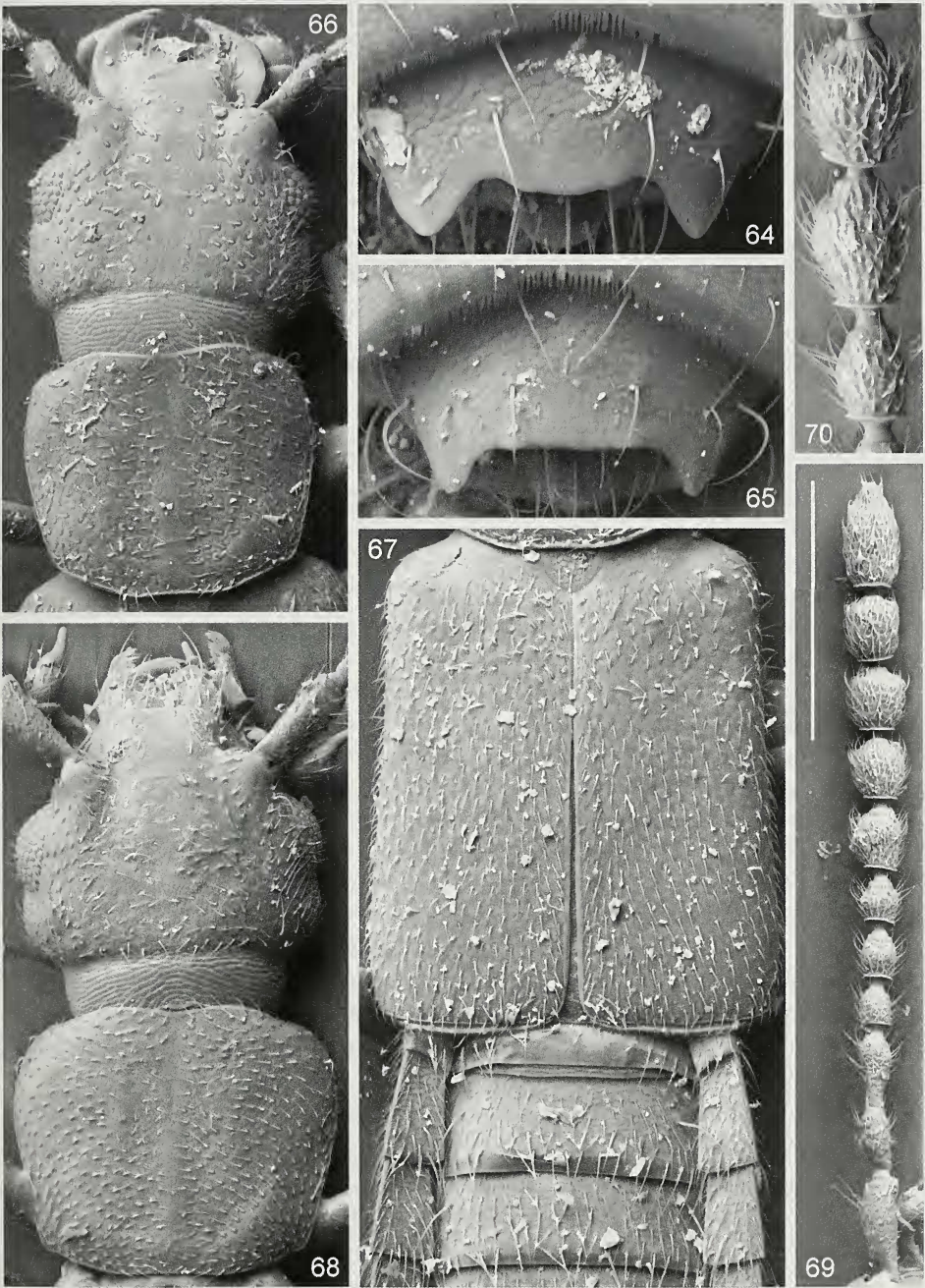
Ancyrophorus angustatus (Erichson). – Kraatz, 1857: 890. – Ganglbauer, 1895: 669. – Jarrige, 1949: 60. – Scheerpeltz, 1950: 60.

Ochtheophilus angustatus (Erichson). – Mulsant & Rey, 1856a-b: 2. – Herman, 1970: 384.

TYPE MATERIAL EXAMINED: *Trogophloeus angustatus* – LECTOTYPE (here designated): “6735 \ *angustatus* Er.; Bavar. Waltl. \ Hist.-Coll. (Coleoptera); Nr. 6735; *Trogophloeus angustatus*; Erichson; Bavaria, Waltl; Zool. Mus. Berlin \ Lectotypus; *Trogophloeus angustatus* Erichson; [on the back] des. Makranczy, 1999 \ *Ochtheophilus angustatus* Erichson; det. Makranczy, 1999” (ZMHB).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 516. Measurements (n=10): HW = 0.50 (0.46-0.53); TW = 0.48 (0.45-0.51); PW = 0.53 (0.47-0.58); SW = 0.61 (0.55-0.67); AW = 0.70 (0.61-0.81); HL = 0.41 (0.38-0.46); EL = 0.14 (0.13-0.15); TL = 0.13 (0.12-0.13); PL = 0.46 (0.43-0.50); SL = 0.85 (0.78-0.92); SC = 0.77 (0.70-0.83); FB = 1.77 (1.67-1.91); BL = 3.30 (2.98-3.59) mm. Head, pronotum and abdomen dark brown with reddish tint, pronotum the same but sometimes a little lighter. Elytra medium to light brown, orangeish, scutellar area to shoulders darker, blackish. Legs, mouthparts and antennae slightly reddish medium brown. Body with moderate lustre in spite of light body colour, only elytra shinier. Pubescence medium dense and uniformly short (regularly spaced) on elytra, longer but finer on head and pronotum, only abdomen



FIGS 64-70

(64-65) Apices of tergites VII and VIII; *Ochtheophilus aurorans* (Peyerimhoff), ♀ (64), *O. scheerpeltzi* (Fagel), ♀ (65). (66-67) *O. filum* (Fauvel); head and pronotum (66), elytra and base of abdomen (67). (68-70) *O. angustatus* (Erichson); head and pronotum (68), antenna (69), antennomeres 6-8 (70). All SEM, dorsal views. Scale bar = 0.12 mm for 64, 0.16 mm for 65, 0.2 for 70, 0.33 mm for 66-67, 0.4 mm for 68-69.

with conspicuous and longer setae; a few particularly strong and long setae near pronotal sides and inner anterior corners of eyes. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

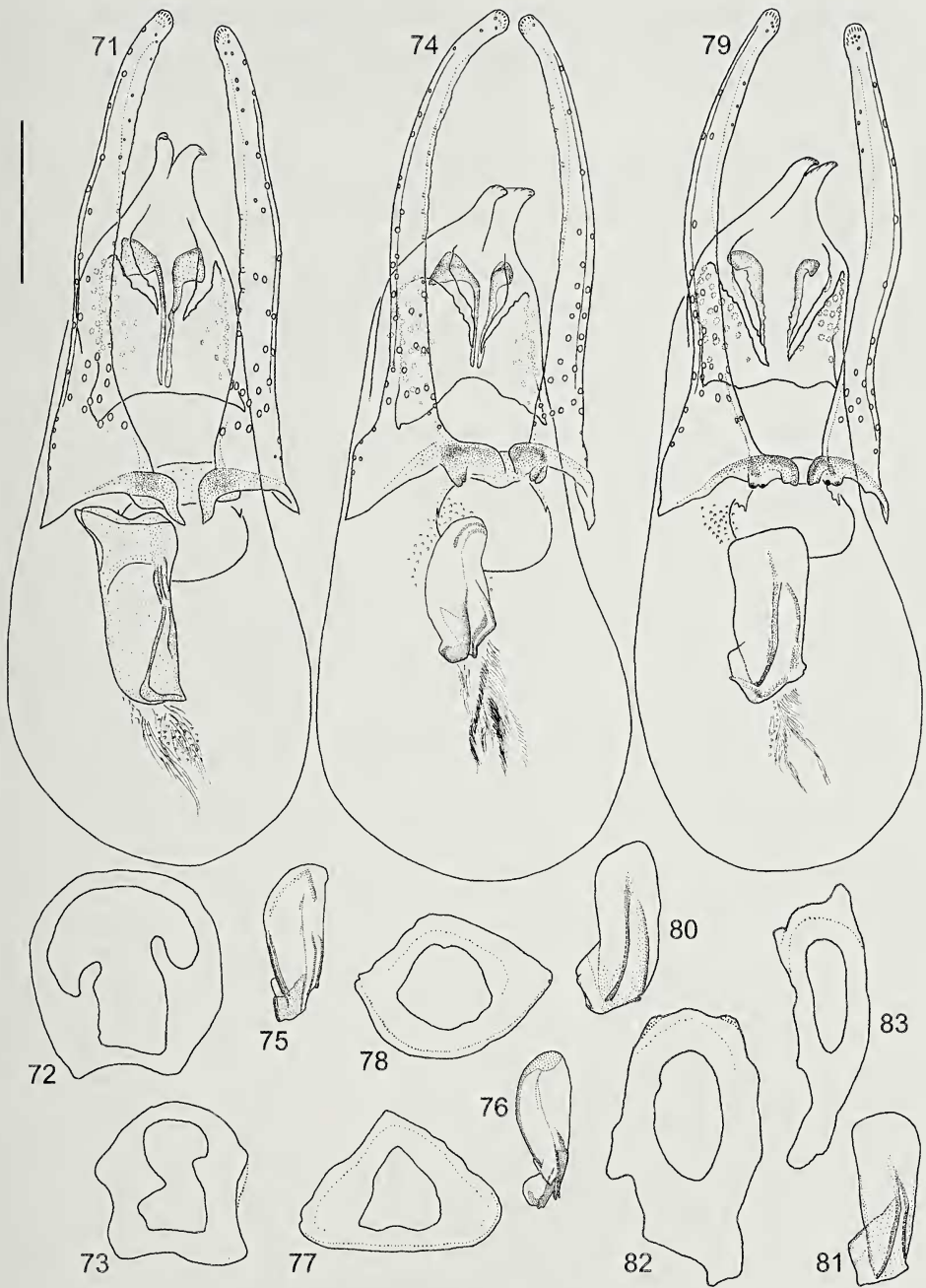
Forebody. Antenna as in Fig. 69, antennomere 7 (and in lesser extent article 8) asymmetrically swollen (Fig. 70) on one side. Clypeus (Fig. 68) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by darker/impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, almost evenly curved, little shorter than eye length. Neck separated by a shallowly impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' partially formed, apart from longitudinal midline two roundish, elevated (shinier) areas near posterior margin and two similar ones on both sides of midline in anterior half of disc; basal arms barely visible. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner half gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete. Elytral apex without conspicuous setae.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 87) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 54, inner sclerites as in Figs 55-56. Female ringstructures as in Figs 57-58.

COMPARATIVE NOTES: This species is somewhat similar to *O. aurorans*, (mostly by size and similar colouration) can be separated by the antennal features (much more elongate antennomeres in *O. angustatus*) and the apex of tergite VIII peculiarly formed in *O. aurorans*.

DISTRIBUTION: The species is so far known from all around the Mediterranean Basin and the southern parts of Central Europe.

BIONOMICS: Specimens were collected mostly from flood debris. It looks like this species inhabits only lowland rivers, so obviously is on the brink of extinction; most specimens are known from old samples, only a few recent records are known,



FIGS 71-83

(71-73) *Ochtheophilus davidi* sp. n.; aedeagus (71), female ringstructures (72-73). (74-78) *O. emarginatus* (Fauvel); aedeagus (74), inner sclerites (75-76), female ringstructures (77-78). (79-83) *O. japonicus* (Watanabe & Shibata); aedeagus (79), inner sclerites (80-81), female ringstructures (82-83). Scale bar = 0.04 mm for 82-83, 0.05 mm for 72-73, 77-78, 0.085 mm for 71, 0.1 mm for 74-76, 79-81.

O. Vorst collected it in 2008, M. Schülke in 1998, P. Wunderle in 2002 (all Italy). Much of what was written about *O. scheerpeltzi* could be repeated here, except that this species was once common, while *O. scheerpeltzi* was perhaps always rare and local.

***Ochtheophilus carnicus* (Scheerpeltz, 1950)**

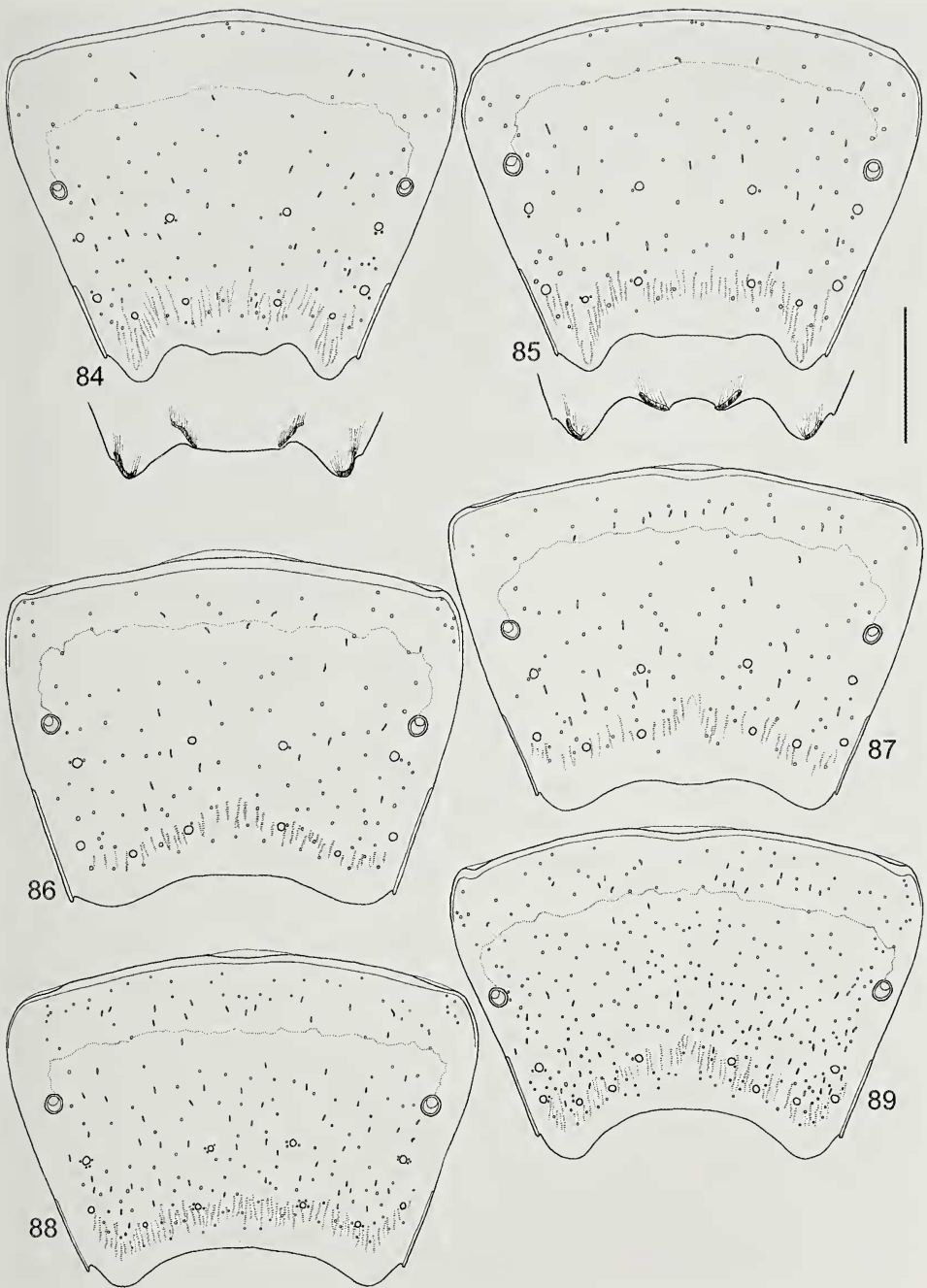
Figs 49-53, 88, 92-95, 518

Ancyrophorus carnicus Scheerpeltz, 1950: 59, 70. – Fagel, 1951: 5.

Ochtheophilus carnicus (Scheerpeltz). – Herman, 1970: 384. – Lohse & Lucht, 1989: 130. – Makranczy, 2001: 179.

TYPE MATERIAL EXAMINED: LECTOTYPE (♂, here designated): “Karnische Alpen; Plöcken, Valentin-; tal, Bach \ 27.7.1948; leg. L. Strupi \ Kleinere Augen; Schläfen länger; u. Fgld. gestreckter \ ex coll.; Scheerpeltz \ Typus; Ancyrophorus; carnicus; O. Scheerpeltz \ Lectotypus; Ancyrophorus; carnicus Scheerpeltz; [on the back] des. Makranczy, 1999 \ Ochtheophilus; carnicus Scheerpeltz; det. Makranczy, 1999” (NHMW).

OTHER MATERIAL: **FRANCE:** [Le Col de la] Cayolle [per] Bayasse, 2500m *+44.30/+06.74*, 5.VII.1953 (and 19.VII.), leg. J. Ochs, mousses torrent, coll. Ochs, MHNG (2). – Sous Neige [Cirque de] Gavarnie *+42.73/-00.02*, VII.1952, *+42.82/+00.15*, coll. Ochs, MHNG (1). – Gavarnie, cascade *+42.73/+00.02*, 13.VIII.1953, coll. Ochs, MHNG (1). — **SWITZERLAND:** [Kt. Bern,] Kandersteg *+46.49/+07.67*, VII.1905, coll. W. Sattler, SMFD (1). – [Kt. Valais/Bern,] Gemmi [pass] *+46.40/+07.61*, 30.VII.1905, coll. W. Sattler, SMFD (1). – Kt. Bern, umg. Kemmeriboden, 1200m *+46.80/+07.93*, 7.VII.1979, leg. S. Kiener, MHNG (1). – Kt. Vaud, stream La Petite Gryonne near Gryon *+46.27/+07.07*, 9.VIII.1912, leg. A. Gaud, MHNG (1). – Kt. Valais, Van d'en Haut, 1400m *+46.13/+07.02*, 22.VIII.1985, leg. I. Löbl, bank of stream, MHNG (1). — **GERMANY:** Bayr. Alpen, Obersee *+47.55/+12.98*, 29.VII.1952, leg. H. Freude, coll. Lohse, MHNG (1). — **AUSTRIA:** Wienerwald, Hadersdorf, *+48.45/+15.72*, 12.XI.1906, leg. Skalitzky, coll. Skalitzky, NHMW (1). – Steiermark, Hochschwabgebiet, Ob. Dullwitz, 1800m *+47.62/+15.18*, 7.VII.1993, leg. A. Kapp, coll. Kapp (2). – Steiermark, Hochschwabgebiet, Innerzwain, Karlschütt, 950m *+47.57/+15.17*, 12.VII.1995, leg. A. Kapp, coll. Kapp (1). – Steiermark, Hochschwabgebiet, Fölz, Endriegelgraben, 820-850m *+47.53/+15.23*, 16.VII.1993, leg. A. Kapp, coll. Kapp (1). – Steiermark, Hochschwabgebiet, Seewiesen, Seetal, 1100m, waterfall *+47.62/+15.27*, 18.VII.1992, leg. A. Kapp, coll. Kapp (3), HNHM (1). – Hochschwab, umg. Bodenbauer, Schottermure d. Wildbaches, ca. 850-1000m [*+47.57/+15.10*], 26.VII-5.VIII.1921, leg. Scheerpeltz & Winkler, (coll. Scheerpeltz and coll. Klima, NHMW, 12). – Steiermark, Hochschwabgebiet, Bodenbauer, Karlgraben, 850m *+47.57/+15.10*, 27.VII.1998, leg. A. Kapp, coll. Kapp (3), BMNH (1). – Grossglockner Geb.[iet] bis Zell/See, car net-trap *+47.32/+12.80*, 21.VI.1965, leg. A. Smetana, coll. Smetana, CNCI (1). – Kärnten, umg. Hermagor, Zuchengraben (mountain stream) *+46.63/+13.36*, 05.VIII.1946, leg. L. Strupi, ZSMC (1), coll. Strupi, NHMW (1), coll. Scheerpeltz, NHMW (1). – Tirol, Lienzer Dolomiten, Kerschbaumer Alm *+46.76/+12.77*, 24.VII-7.VIII.1948, leg. F. Schubert, coll. Scheerpeltz, NHMW (2). – Brandnertal *+47.07/+09.74*, 13.VI-5.VII.1952, leg. F. Schubert, coll. Scheerpeltz, NHMW (2). – Allgäuer Alpen *+47.40/+10.25*, leg. J. Breit, NHMW (1). – Vorarlberg, Spullers [Bühel], *+47.16/+10.09*, leg. J. Moosbrugger, coll. Moosbrugger, NHMW (1). – Arlberg-Gebiet, Stuben, *+47.14/+10.16*, leg. J. Breit, NHMW (3). — **ITALY:** S-Tirol, Östl. Dolom., Prager Wildsee [1500m] *+46.69/+12.09*, 6.VII.1961, leg. Peez, im Seeufer in. Kolksteingras, coll. Smetana, CNCI (1). – Dolomiten, Armentarola, 1800m *+46.56/+11.92*, 10.VII.1972, leg. R. Köstlin, SMNS (1). – Piemonte, Valle del Gries, 46°26.57'N, 8°22.25'E, 2120m *+46.44/+08.37*, 4.VIII.2011, leg. O. Vorst (Z653j), alpine brook, coll. Vorst (1). – Friuli - Ven. Giul., Fella-Ufer W Carnia (5), 46°23'N, 13°07'E, 250m, 12.IX.1998, leg. M. Schülke (5), Hochwassergenist Eisenbahnbrücke, coll. Schülke (1♂). – Parco Lessinia, Val Frasselle *+45.66/+11.13*, 22.VII.1991, leg. A. Zanetti, muschi/ghiaia, coll. Zanetti (1). – Piccole Dolomiti (TN), Rifugio Scalorbi, 1900m *+45.71/+11.14*, 13.VI.1976, leg. A. Zanetti, coll. Zanetti (1). – Dolomiten, Gardeccia *+46.45/+11.64*, 17.VII.1961, [leg. Lohse], MHNG (1). – Abruzzo, Poio [Rio?] Arno *+42.49/+13.55*, 16.VII.1907, leg. A. Fiori, NHMW (1). – Italia bor., Campolario *+45.92/+10.36*, leg. Wingelmüller, NHMW (1). – Cima



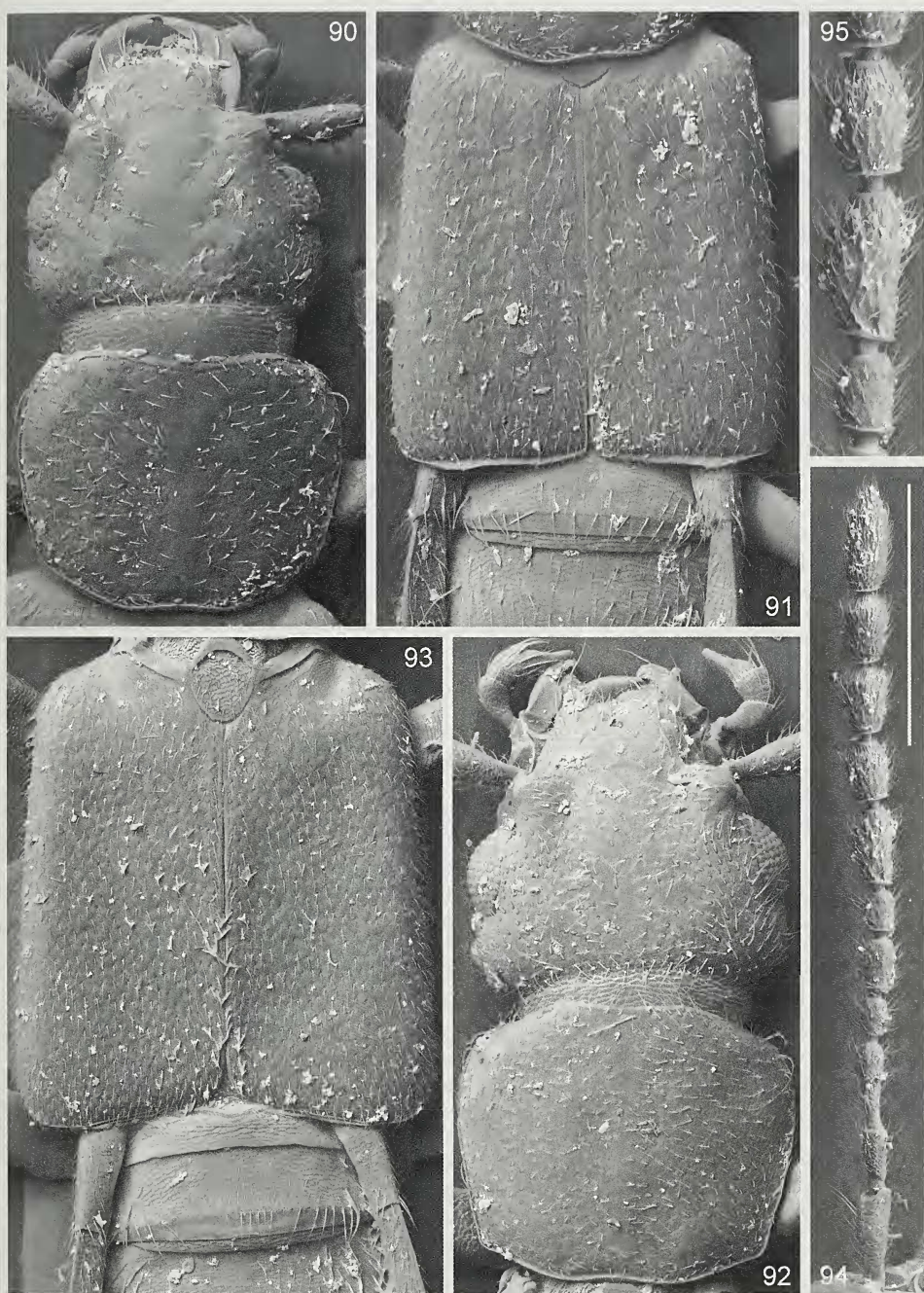
FIGS 84-89

Tergites VIII; *Ochtheophilus aurorans* (Peyerimhoff) (84), *O. scheerpeltzi* (Fagel) (85), *O. filum* (Fauvel) (86), *O. angustatus* (Erichson) (87), *O. carnicus* (Scheerpeltz) (88), *O. davidi* sp. n. (89). Scale bar = 0.1 mm for 85, 0.11 mm for 86, 0.13 mm for 84, 0.14 mm for 87, 0.165 mm for 88-89.

Tombea, Indicarien, $*+45.81/+10.63*$, 28.VI.1905, leg. Pinker, coll. Pinker, NHMW (1). — [S-Tirol.] Wolkenstein $*+46.55/+11.77*$, leg. Ganglbauer (NHMW, 1♀). — **SLOVENIA**: (N. Krain = Carniol. Septent.), Grintouz-Massiv, südgraben der Brana [peak], Bistriza [valley], ca. 1100m, $*+46.34/+14.56*$, 24.VII.1923, leg. A. Winkler (& O. Scheerpeltz), im bachschotter, coll. Scheerpeltz, NHMW (1). — **SLOVAKIA**: Vysoké Tatry, Kôprová dol., Výšná Závrať 1340-1400m, $*+49.19/+19.99*$, 16.VII.1999 leg. Jászay, v potoku na mach. nárastoch [in stream on moss growth], SMBC (1). — **ROMANIA**: Transylvania, Bucsecs, [18]95, leg. Ganglbauer, coll. Bernhauer, FMNH (1). — jud. Dâmbovița, Munții Bucegi, "La Lacuri", confluence of Vîlceul Clinului and Izvorul Dorului, $45^{\circ}20'36''\text{N}$, $25^{\circ}28'14''\text{E}$, 1750m, 19.VII.2004, leg. Gy. Makranczy (145), from fine gravel (and moss) at small stream, flotation, HNHM (1). — Bucegi Mts., Sinaia, La Lacuri, 1700m [same locality as previous], 14.VI.2001, leg. D.A. Lott, stream bank, HNHM (1). — **BOSNIA-HERZEGOVINA**: Herzegovina, Nevesinje $*+43.27/+18.12*$, NHMW (1). — **GEORGIA**: Transcauc., Mzchete [Mtskheta] pr. Tbilisi, Aragvi [river], $*+41.86/+44.72*$, 12-13.VI.1997, leg. D. Wrase & M. Schülke, ZMHB (1). — **TAJIKISTAN**: NW-Pamir, Peter-I. Mts., Tshil-Dara, 1700-2300m [$*+38.79/+70.35*$], 21-24.VI.1990, leg. M. Schülke & D. Wrase, coll. Schülke (1).

REDESCRIPTION: Forebody as in Fig. 518. Measurements ($n=10$): HW = 0.55 (0.51-0.59); TW = 0.51 (0.46-0.54); PW = 0.61 (0.55-0.65); SW = 0.78 (0.69-0.85); AW = 0.84 (0.74-0.92); HL = 0.42 (0.39-0.45); EL = 0.18 (0.17-0.20); TL = 0.105 (0.09-0.12); PL = 0.50 (0.45-0.52); SL = 0.99 (0.87-1.08); SC = 0.90 (0.81-0.98); FB = 1.99 (1.80-2.17); BL = 3.79 (3.50-4.15) mm (Tajikistan specimen: HW = 0.55; TW = 0.53; PW = 0.58; SW = 0.67; AW = 0.76; HL = 0.45; EL = 0.16; TL = 0.14; PL = 0.51; SL = 0.89; SC = 0.81; FB = 1.96; BL = 4.13 mm). Head, pronotum and abdomen blackish dark brown with occasional reddish tint. Elytra reddish medium to dark brown, scutellar area to shoulders darker, blackish. Legs, mouthparts and antennae reddish medium to dark brown, basal antennomeres sometimes partly darker. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence medium dense and uniformly short (regularly spaced) on elytra, longer but finer on head and pronotum, only abdomen with conspicuous and longer setae; a few particularly strong and long setae near pronotal sides and inner anterior corners of eyes. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 94, antennomere 7 (and in lesser extent article 8) asymmetrically swollen (Fig. 95) on one side. Clypeus (Fig. 92) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by a feeble transversal line (frontoclypeal suture) with weak microsculpture. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, almost evenly curved, little longer than half of eye length. Neck separated by a shallowly impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' weakly formed, apart from longitudinal midline two roundish, elevated (shinier) areas near posterior margin and two similar ones on both sides of midline in anterior half of disc; in the corners of the anchor slight elongate impressions directed outwards. Elytra (Fig. 93) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner half gently convex. Elytral surface rather even with two shallow, very



FIGS 90-95

(90-91) *Ochtheophilus aurorans* (Peyerimhoff); head and pronotum (90), elytra and base of abdomen (91). (92-95) *O. carnicus* (Scheerpeltz); head and pronotum (92), elytra and base of abdomen (93), antenna (94), antennomeres 6-8 (95). All SEM, dorsal views. Scale bar = 0.27 for 95, 0.38 for 90-91, 0.45 for 92, 0.5 mm for 93-94.

elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 88) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 49, inner sclerites as in Figs 50-51. Female ringstructures as in Figs 52-53.

COMPARATIVE NOTES: As the largest species in this group, it can be confused not with its closest relatives but members of other groups, most importantly *O. praepositus*, *O. rosenhaueri* and *O. lenkoranus*. The easiest way of separation is by the asymmetrically swollen antennomere 7 in *O. carnicus*, also the eyes are generally smaller in this species than in the others; in the male genitalia it stands out by its huge, reverse C-shaped inner sclerite.

DISTRIBUTION: The species is so far known from the highest mountain ranges in Central Europe plus northern Italy and the northern Balkans – all known localities are with limestone. Single specimens were found in Georgia (Transcaucasia) and Tajikistan – these suggest wider distribution; the huge gaps can perhaps be explained by the rarity of the species and the little collecting in those areas.

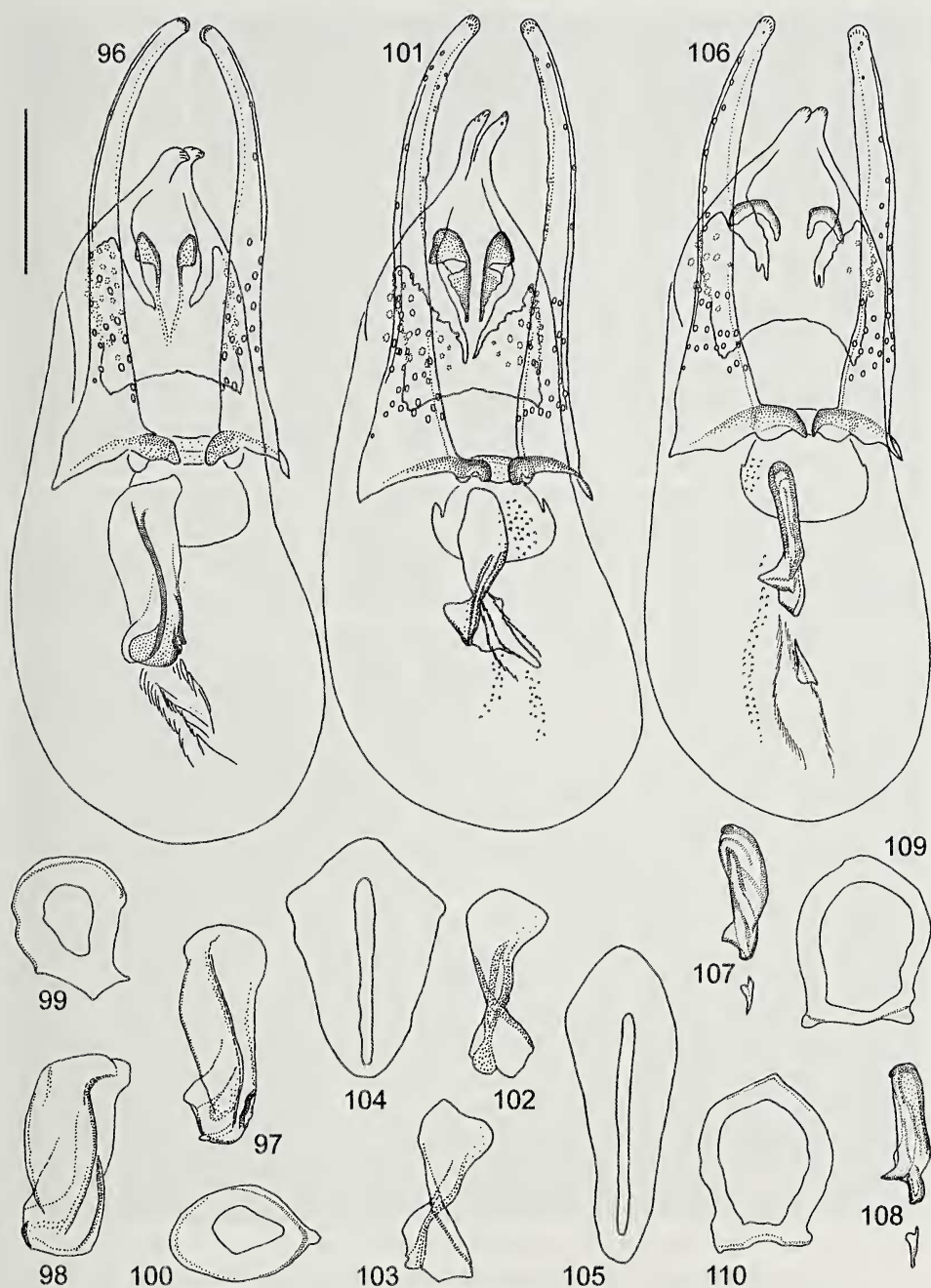
BIONOMICS: It appears that this rare species (never more than a few individuals are encountered) is bound to high mountain ranges predominantly of limestone. Compared to other species found in the same area, it can live at slower, often very small streams (with flow under 2 m³/s) and rather dry macrohabitats; according to the recorded microhabitats it is not favouring moss, sifted from debris at bank, found on gravelly streambank, at waterfall. Also captured by car-netting.

***Ochtheophilus filum* (Fauvel, 1875)** Figs 6, 24-25, 59-63, 66-67, 86, 112-113, 517
Ancyrophorus filum Fauvel, 1875a: ix [=1875b: 211]. – Ganglbauer, 1895: 670. – Fagel, 1951b: 1, 3.

Ochtheophilus filum (Erichson). – Herman, 1970: 384. – Herman, 2001: 1721.

TYPE MATERIAL EXAMINED: LECTOTYPE (♀): “[PORTUGAL:] Coimbra; inond-ons [*+40.20/-08.42*]. 3[=III] \ filum; Fauv. \ Type [curator label] \ G. Fagel det., 1957; Ancyrophorus; filum; (Fauvel) Fagel \ Lectotypus; Ancyrophorus; filum Fauvel \ Ochtheophilus; filum Fauvel; det. Makranczy, 1999” (ISNB).

OTHER MATERIAL: **PORTUGAL:** Porto *+41.11/-08.54*, coll. Fauvel, ISNB (1). — **SPAIN:** Madrid *+40.40/-03.68*, MNMS (1). – [Sierra de Guadarrama,] [El] Escorial *+40.59/-



FIGS 96-110

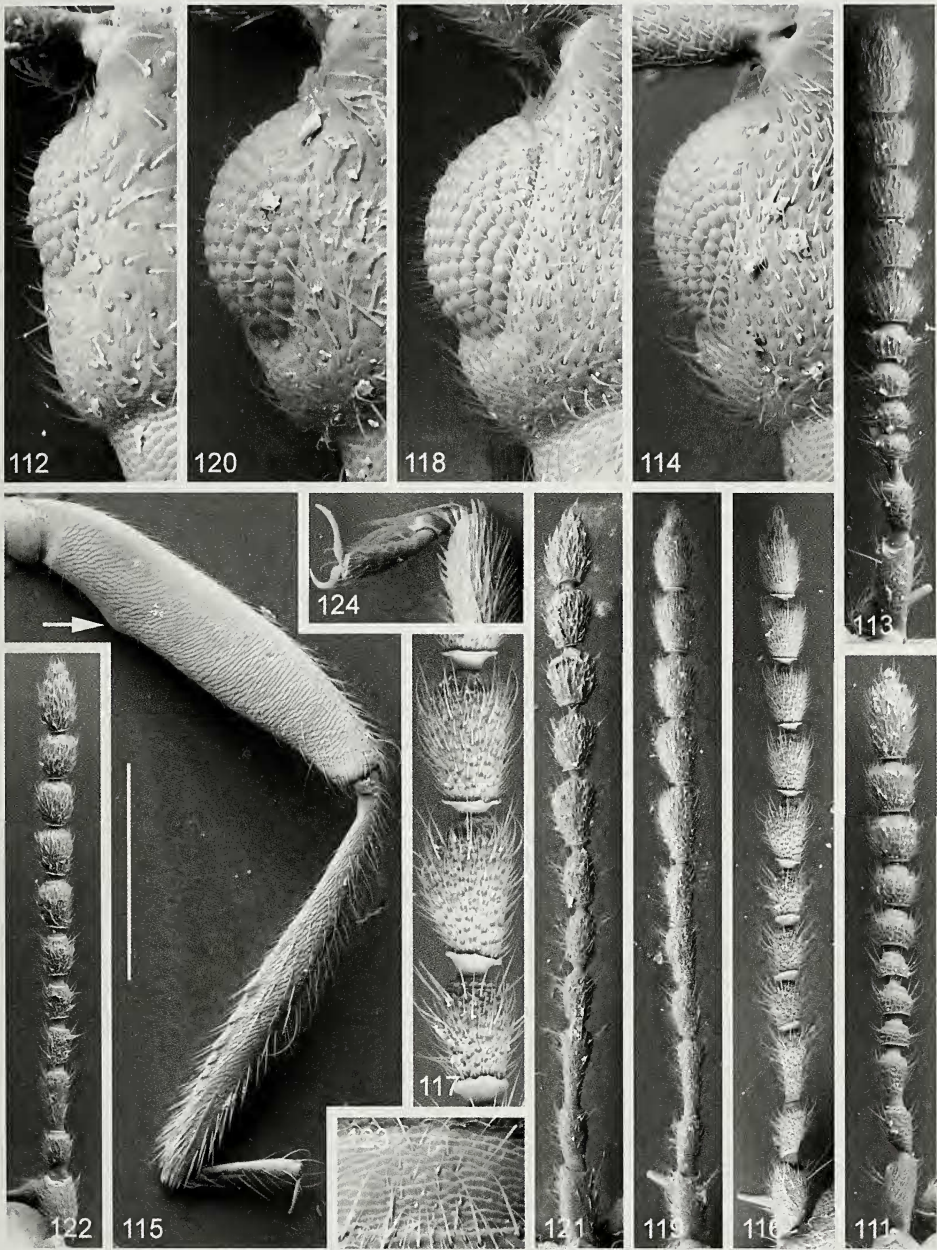
(96-100) *Ochtheophilus sericinus* (Solsky); aedeagus (96), inner sclerites (97-98), female ring-structures (99-100). (101-105) *O. tibetanus* sp. n.; aedeagus (101), inner sclerites (102-103), female ringstructures (104-105). (106-110) *O. aureus* (Fauvel); aedeagus (106), inner sclerites (107-108), female ringstructures (109-110). Scale bar = 0.05 mm for 99-100, 0.06 mm for 104-105, 0.09 mm for 96-98, 0.1 mm for 101-103, 106-110.

04.15*, coll. Jarrige, MNHP (1 ♂, 2). – Candeleda, inondations du fleuve [Rio] Tiétar *+40.16/-05.24*, IV.1934, leg. Dr. J. Baum, coll. Roubal, SNMC (1), coll. Smetana, CNCI (1 ♂), MHNG (1).

REDESCRIPTION: Forebody as in Fig. 517. Measurements (n=10): HW = 0.38 (0.37-0.40); TW = 0.38 (0.36-0.39); PW = 0.38 (0.36-0.40); SW = 0.44 (0.41-0.46); AW = 0.48 (0.42-0.52); HL = 0.34 (0.31-0.36); EL = 0.11 (0.10-0.12); TL = 0.125 (0.12-0.13); PL = 0.34 (0.31-0.36); SL = 0.61 (0.57-0.63); SC = 0.56 (0.53-0.58); FB = 1.34 (1.30-1.39); BL = 2.31 (2.15-2.49) mm. Head dark brown with reddish tint. Pronotum the same but occasionally a little lighter, while abdomen varies from blackish brown to more reddish medium to dark brown. Elytra lighter medium brown except scutellar area to shoulders sometimes darker, slightly blackish. Legs, mouth-parts and antennae reddish medium brown. Body with moderate lustre in spite of light body colour, only elytra shinier. Pubescence medium dense and uniformly short (regularly spaced) on elytra, longer but finer on head and pronotum, only abdomen with conspicuous and longer setae; a few particularly strong and long setae near pronotal sides and inner anterior corners of eyes. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 113, antennomere 7 (and in lesser extent article 8) asymmetrically swollen on one side. Clypeus (Fig. 66) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by black transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 112) not evenly curved, almost straight anteriorly, strongly curved posteriorly, significantly longer than eye length. Neck separated by a shallowly impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' partially formed, apart from longitudinal midline two roundish, elevated (shinier) areas near posterior margin and two similar ones on both sides of midline in anterior half of disc; basal arms barely visible. Elytra (Fig. 67) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 86) basal edge evenly arched, but straight at a short distance in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite



FIGS 111-124

(111) *Ochtheophilus aurorans* (Peyerimhoff); antenna. (112-113) *O. filum* (Fauvel); side of head (112), antenna (113). (114-117) *O. japonicus* (Watanabe & Shibata); side of head (114), hind leg, ♂ (115), antenna (116), antennomeres 6-8 (117). (118-119) *O. davidi* sp. n.; side of head (118), antenna (119). (120-121) *O. tibetanus* sp. n.; side of head (120), antenna (121). (122-124) *O. sericinus* (Solsky), antenna (122), middle of neck (123), protarsus (124). All SEM, dorsal views. Scale bar = 0.15 mm for 112, 0.20 mm for 118, 120, 0.22 mm for 114, 123, 0.27 mm for 113, 117, 124, 0.38 mm for 111, 115, 0.45 mm for 121, 0.5 mm for 119, 0.6 mm for 116, 122.

VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 59, inner sclerites as in Figs 60-61. Female ringstructures as in Figs 62-63.

COMPARATIVE NOTES: This is the smallest species in this group and therefore cannot be confused with the other two group members, but mostly those of the (similarly sized) *aurorans* group, however, it lacks their peculiar formation of the tergite VIII apex and the modified palisade fringe of tergite VII.

NOTE: This taxon was described by Fauvel (1875) with clear statement that the type locality is Coimbra, Portugal. Description also contains reference to another specimen, which was sent by Dr. Skalitzky (collector from Bohemia); Fagel (1951) redescribed the species, stated that the other specimen in the description belonged to another species which he described as new in the same paper. He treats the only available specimen of *O. filum* from the type locality as "holotype" (and thereby designates a lectotype, ICZN, edn. 2000, Art. 74.5) and some other conspecific exemplars from the Fauvel collection as "Paratypes"; however, the latter specimens (from Porto and Madrid, respectively) are not syntypes.

DISTRIBUTION: The species is so far known only from Portugal and Spain.

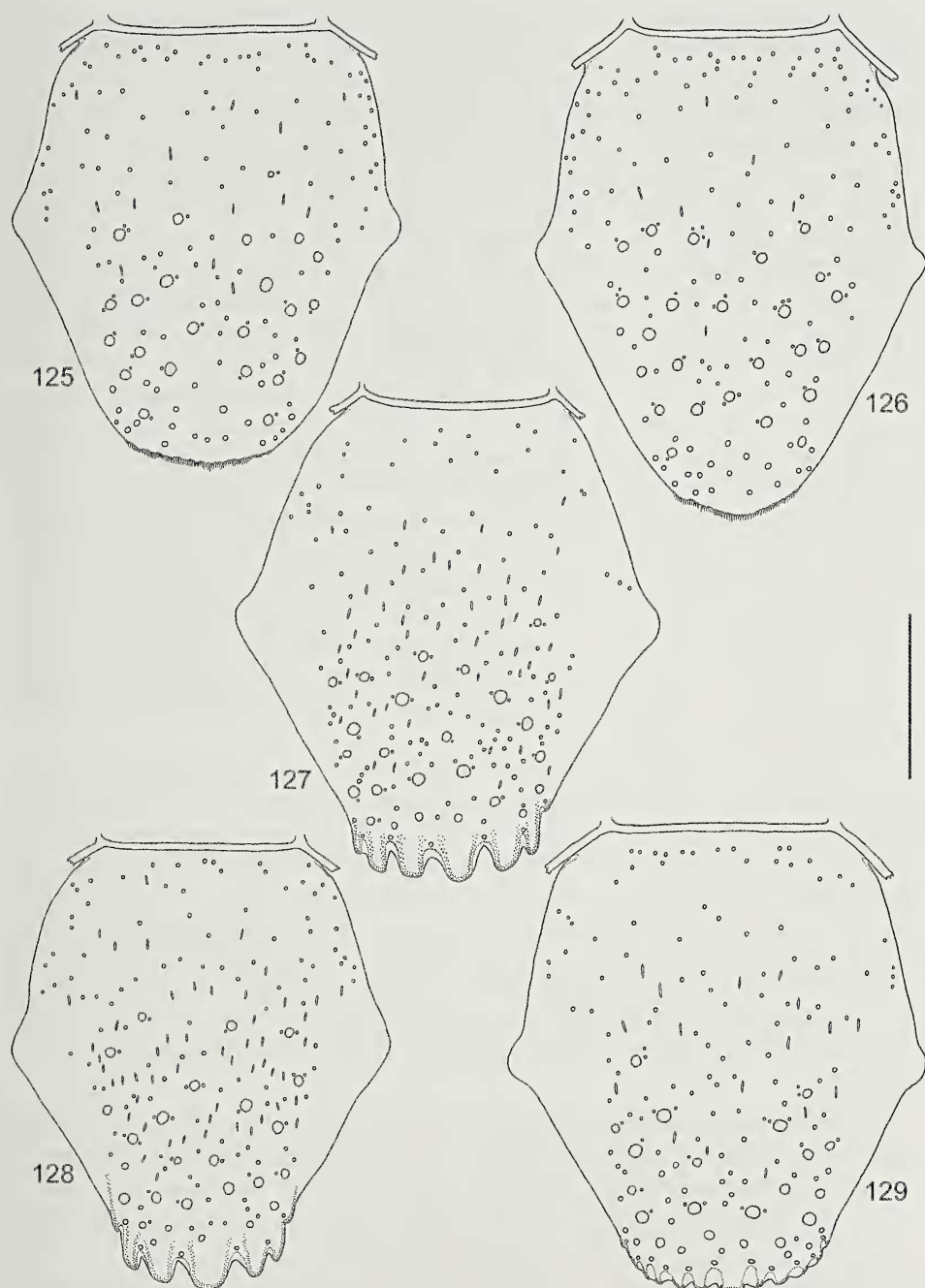
BIONOMICS: Only a few old specimens of this species are known (last encountered in 1934!) with no detailed record of its habits. Some of these riverbanks may still be in decent condition, therefore its lack of newer records may be due to lack of attention and unsuitable collecting methods. Appropriate techniques could still find it, although it is unlikely to be common.

III. *Ochtheophilus emarginatus* species group

Ochtheophilus davidi sp. nov. Figs 71-73, 89, 118-119, 150-151, 169-170

TYPE MATERIAL: HOLOTYPE (♂): "CHINA: Sichuan Prov., Bao'xing Co., Deng Chi Valley, Deng Chi stream 7km S + 3km E Feng Tong Zhai (30°19' N, 102°48' E), 15.VIII.1996, rocky mountain stream near Père David's church, 2000m elev., leg. R.E. Roughley" (JBWM, barcode 0091585). – PARATYPES (4): same data as holotype (JBWM, 2♀ [0091582-3], MHNG, 1♀ [0091586]). – "INDIA: [Uttaranchal] Kumaon, Sarju valley, 5000ft [*+30.03/+79.87*], [leg.] G.C. Champion" (BMNH, 1♀).

DESCRIPTION: Measurements (n=5): HW = 0.65 (0.64-0.68); TW = 0.59 (0.57-0.62); PW = 0.70 (0.68-0.74); SW = 0.96 (0.94-0.98); AW = 1.04 (0.96-1.12); HL = 0.51 (0.48-0.53); EL = 0.22 (0.21-0.25); TL = 0.10 (0.09-0.11); PL = 0.56 (0.54-0.59); SL = 1.15 (1.10-1.18); SC = 1.04 (1.00-1.07); FB = 2.32 (2.28-2.36); BL = 3.76 (3.48-4.36) mm. Relatively light coloured species, body dark brown with slight reddish tint, only head darker, blackish. Legs, mouthparts and antennae medium to dark brown, mid-antennal segments sometimes blackish (especially antennomeres 5-6-7). Tibiae darker brown, except both ends lighter. Body with moderate lustre due to very dense elytral setation and fine but dense punctation all over. Pubescence medium short and medium dense, much shorter and more dense on elytra, longer and much sparser on abdomen. Elytral apex without conspicuous setae. Last tarsomere rather densely (and finely) setose.



FIGS 125-129

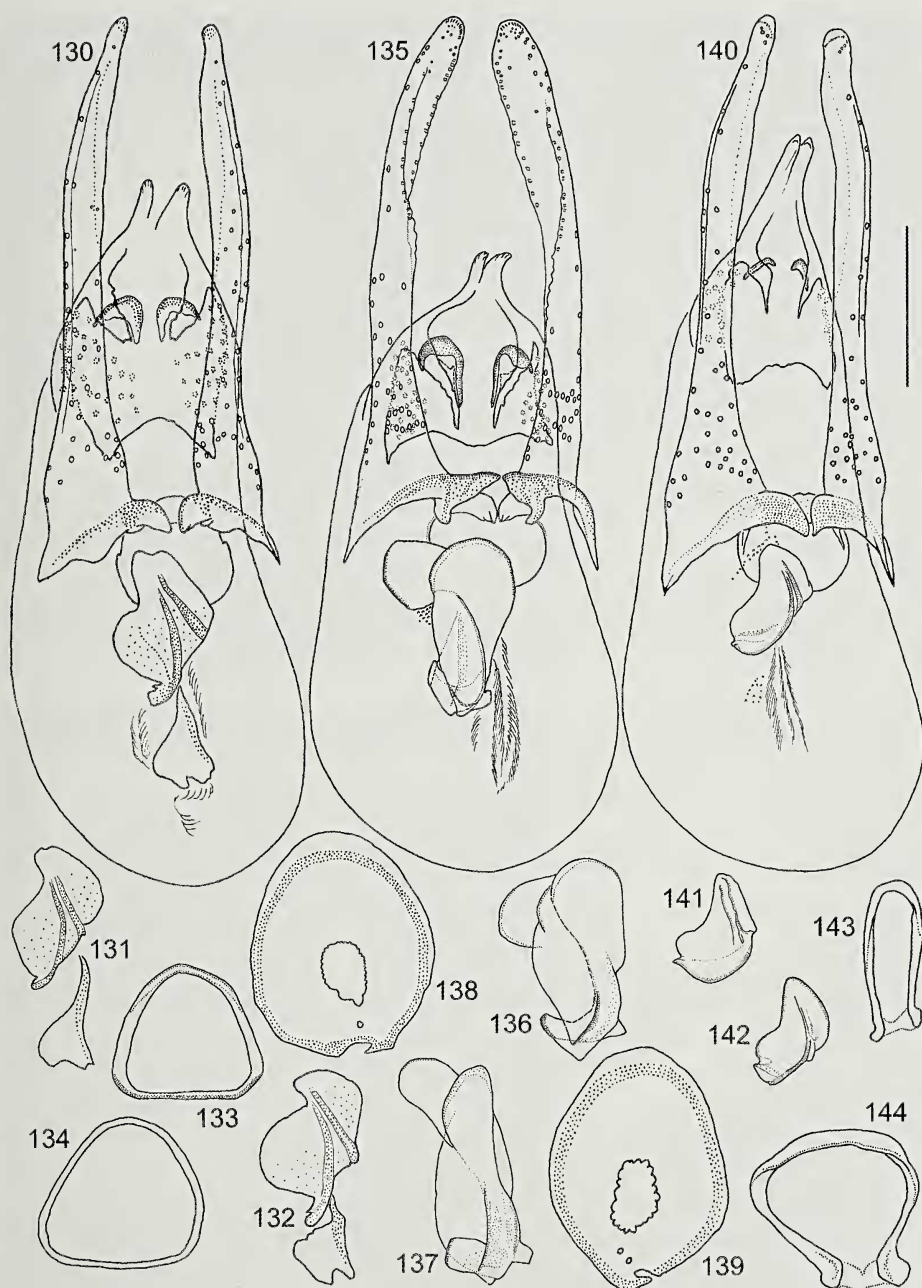
Tergites X; *Ochtheophilus japonicus* (Watanabe & Shibata), ♂ (125), same, ♀ (126), *O. emarginatus* (Fauvel), ♂ (127), same, ♀ (128), *O. sericinus* (Solsky), ♂ (129). Scale bar = 0.1 mm for 129, 0.115 mm for 125-128.

Forebody. Antenna as in Fig. 119, antennomere 7 (and in lesser extent article 8) asymmetrically swollen on one side. Clypeus (Fig. 169) sparsely and finely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 118) slightly bulging, evenly curved, barely longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 very gently concave. 'Anchor' rather weakly formed, more apparent in longitudinal midline as an elevated, impunctate, unsculptured (shinier) line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In the corners of the anchor slight elongate impressions directed outwards. Elytra (Fig. 170) slightly broadening posteriorly, sutural corners broadly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with extremely fine coriaceous microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head very fine, unevenly dispersed, with a sparsely punctured longitudinal stripe in middle of vertex, on pronotum rather fine punctures with very uneven strength and density; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 89) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X modified, apex with quite a few, but moderately deep emarginations, broader in males (Fig. 150) more narrow in females (Fig. 151). Aedeagus as in Fig. 71. Female ringstructures as in Figs 72-73.

ETYMOLOGY: Named after Père David [Armand David] (1826-1900) who was a missionary priest in Sichuan as well as a zoologist and botanist, made a pioneering and very important contribution to the knowledge on the flora and fauna of the area.

COMPARATIVE NOTES: This is an unusually light coloured species with somewhat darker head and it stands out with this colour pattern as the other species in the group are either uniformly dark coloured or only their elytra (or part of) with lighter reddish colour. In other features similar to the closest relatives, last tarsomere setose. Members of this group are only similar to *O. championi* and *O. nigerrimus* with similarly elongate antenna (but without asymmetrically swollen article 7) and dense, somewhat irregular elytral setation.



FIGS 130-144

(130-134) *Ochtheophilus californicus* sp. n.; aedeagus (130), inner sclerites (131-132), female ringstructures (133-134). (135-139) *O. laevis* (Watanabe & Shibata); aedeagus (135), inner sclerites (136-137), female ringstructures (138-139). (140-144) *O. flexuosus* Mulsant & Rey; aedeagus (140), inner sclerites (141-142), female ringstructures (143-144). Scale bar = 0.06 mm for 133-134, 0.07 mm for 143-144, 0.075 mm for 138-139, 0.1 mm for 130-132, 140-142, 0.135 mm for 135-137.

DISTRIBUTION: Currently only known from China (Sichuan) and northern India, this suggests a very rare species with rather wide distribution throughout the Himalaya and SW China.

BIONOMICS: Information from the collector, Dr. Roughley: "We were searching for *Amphizoa davidi* and decided to visit Pere David's church on the off chance that this might have been the locality where it was collected. We tried there without luck but along the little stream near the church I did get these few staphylinids running around on moss and stones within the stream/spring/seep."

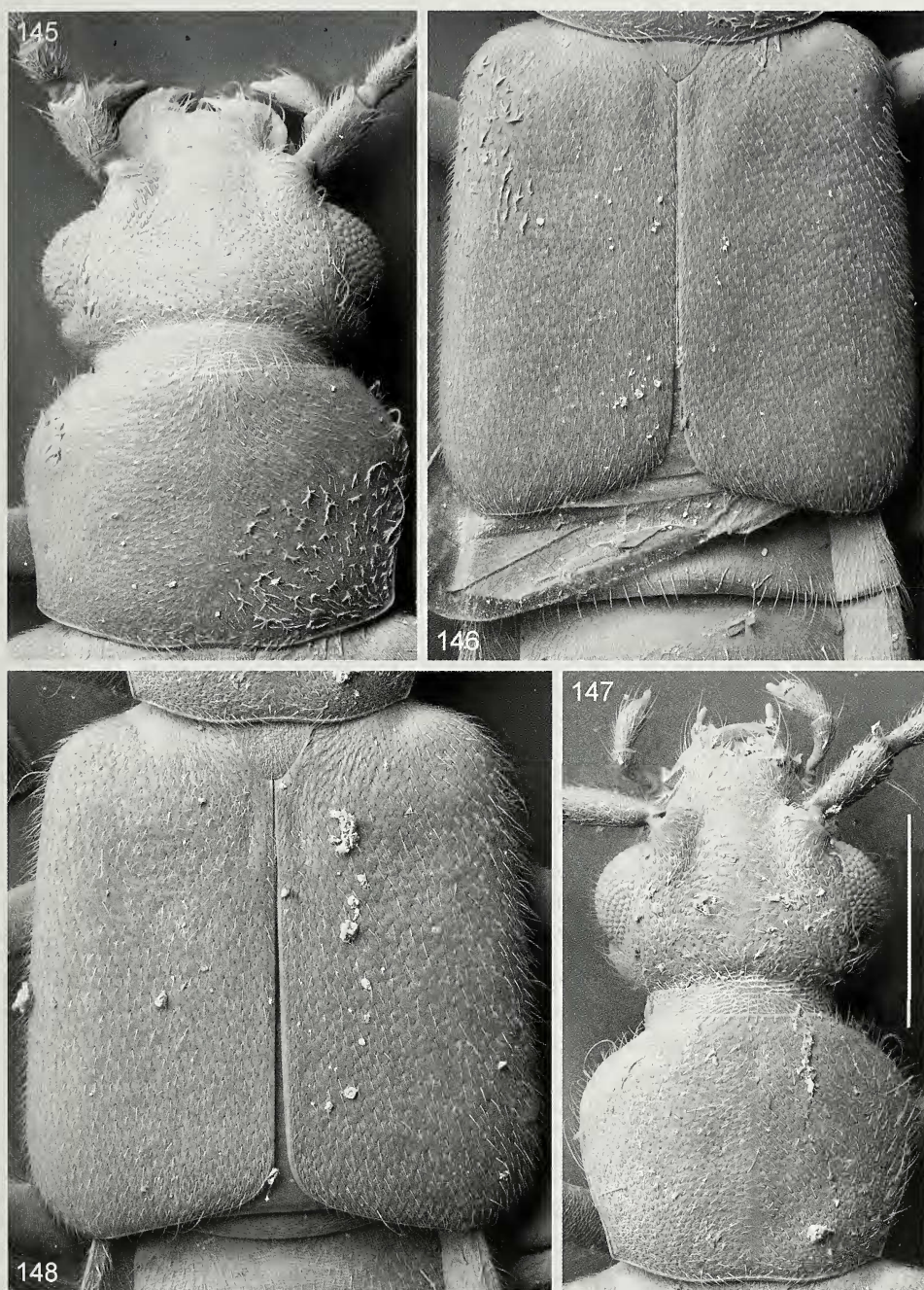
***Ochtheophilus emarginatus* (Fauvel, 1871)** Figs 7, 74-78, 127-128, 519, 589
Ancyrophorus emarginatus Fauvel, 1871: 167 [=1872: 141]. – Ganglbauer, 1895: 667. – Jarrige, 1949: 59. – Fagel, 1951a: 1. – Smetana, 1967: 307.
Ochtheophilus emarginatus (Fauvel). – Herman, 1970: 384. – Gildenkov, 2000a: 1187. – Gildenkov, 2000b: 849. – Makranczy, 2001: 178.

TYPE MATERIAL EXAMINED: *Ancyrophorus emarginatus* – LECTOTYPE (here designated): "Arnedillo; Espagne \ Digne; bords de la Bléone; aoul [duplicate locality label, considered false] \ Rosenhaueri Kiesw. [printed, probably curator label] \ Type \ G. Fagel det., 195.; emarginatus Fauv. \ Lectotypus; Ancyrophorus; emarginatus Fauvel; [on the back] des. Makranczy, 1999 \ Ochtheophilus; emarginatus Fauvel; det. Makranczy, 1999" (ISNB). – PARALECTOTYPE (1): "Arnedillo \ Fauvel (dark greenish disc) \ 5028 (white disc) \ P. de Borre. \ Paralectotypus; Ancyrophorus; emarginatus Fauvel; [on the back] des. Makranczy, 1999 / Ochtheophilus; emarginatus Fauvel; det. Makranczy, 1999" (MHNG, 1).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 519. Measurements (n=10): HW = 0.69 (0.66-0.73); TW = 0.61 (0.58-0.65); PW = 0.77 (0.73-0.83); SW = 1.03 (0.96-1.11); AW = 1.07 (0.97-1.20); HL = 0.52 (0.48-0.55); EL = 0.24 (0.23-0.26); TL = 0.10 (0.09-0.11); PL = 0.61 (0.57-0.63); SL = 1.20 (1.16-1.25); SC = 1.09 (1.04-1.14); FB = 2.40 (2.30-2.56); BL = 4.37 (3.96-4.76) mm. Head, pronotum and abdomen blackish dark brown, occasionally with reddish tint, especially on pronotum around its margins. Elytra somewhat reddish-yellowish medium brown, sometimes only middle of disc and darker around, forming an oblique lighter spot on elytra with darker edges, scutellar area to shoulders blackish, as well as broadly around outer posterior corners and apical margin. Legs, mouthparts and antennae reddish medium to dark brown, apex of antenna often lighter. Body with moderate lustre due to very dense elytral setation and fine but dense punctation all over. Pubescence medium short and medium dense, much shorter and more dense on elytra, longer and much sparser on abdomen. Elytral apex without conspicuous setae. Tarsi rather densely (and finely) setose.

Forebody. Antenna as in Fig. 589, antennomere 7 (and in lesser extent article 8) asymmetrically swollen on one side. Clypeus finely and sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supra-antennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with a pair of very shallow impressions in middle. Temples slightly bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pro-



FIGS 145-148

(145-146) *Ochtheophilus sericinus* (Solsky); head and pronotum (145), elytra (146). (147-148) *O. japonicus* (Watanabe & Shibata); head and pronotum (147), elytra (148). All SEM, dorsal views. Scale bar = 0.06 mm for 84, 0.1 mm for 82, 83, 0.16 mm for 87, 0.25 mm for 85-86.

notal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' weakly formed, more apparent in longitudinal midline as an elevated, impunctate, unsculptured (shinier) line, other parts barely discernible. Elytra slightly broadening posteriorly, sutural corners broadly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X modified, apex with just a couple, but rather deep emarginations, broader in males (Fig. 127), more narrow in females (Fig. 128). Aedeagus as in Fig. 74, inner sclerites as in Figs 75-76. Female ringstructures as in Figs 77-78.

COMPARATIVE NOTES: Rather similar to *O. sericinus*, the two both have partly lighter, reddish elytra, but the antennae of *O. sericinus* are shorter. *O. emarginatus* is the largest species of the genus within its distribution range.

DISTRIBUTION: The species is known from the whole Mediterranean Basin (North Africa and in Europe mostly along the coastline, rarely goes much north from it) through Turkey and the Caucasus to Iran and Afghanistan.

BIONOMICS: Specimens were collected near river, on riverbank, under stones, flood debris, at waterfall from wet moss or sifted from wet leaf litter under waterfall, sifted from moss, also captured at light.

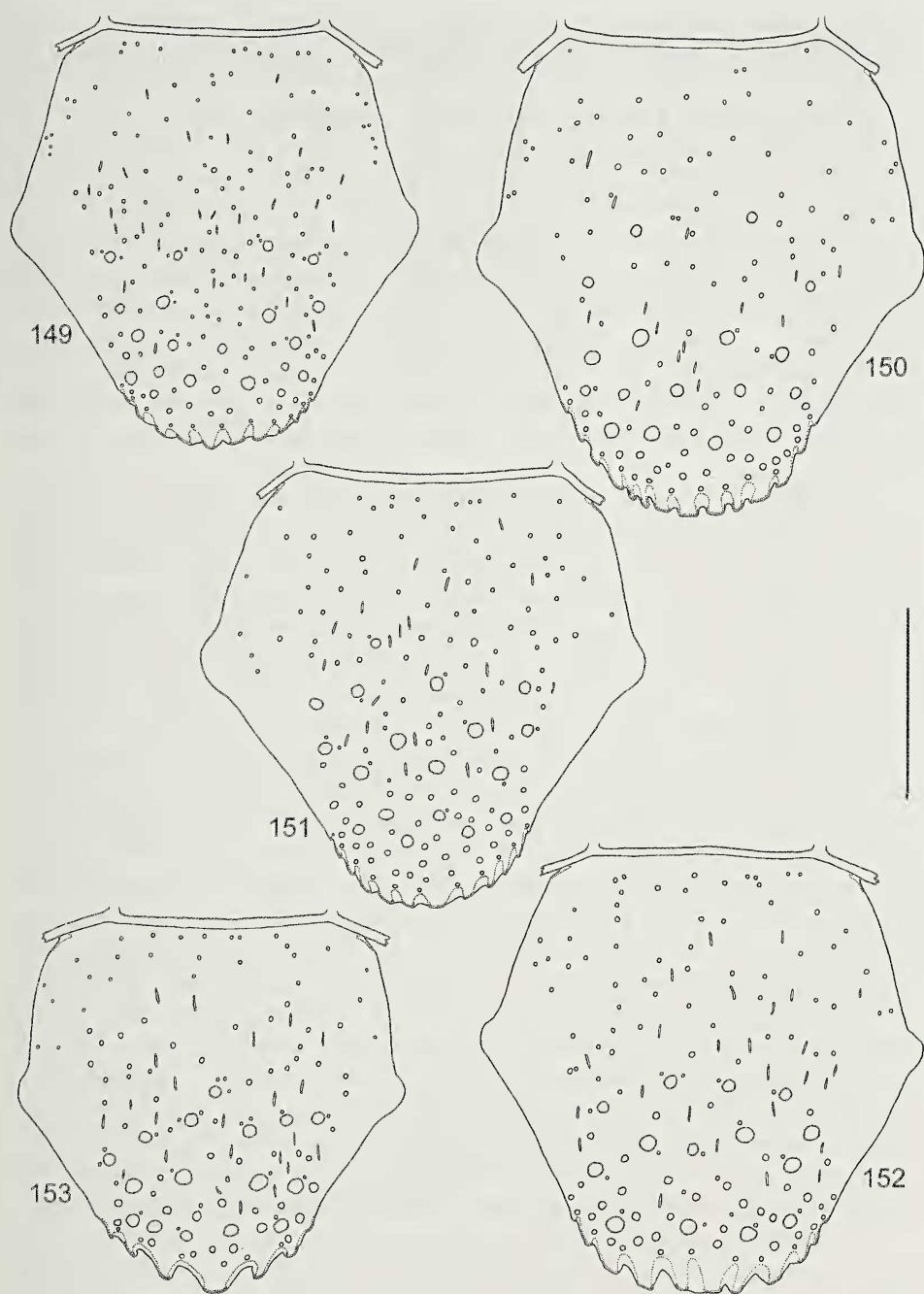
Ochtheophilus japonicus (Watanabe & Shibata, 1961) Figs 79-83, 114-117, 125-126, 147-148, 521

Ancyrophorus japonicus Watanabe & Shibata, 1961: 6.

Ochtheophilus japonicus (Watanabe & Shibata). – Herman, 1970: 384.

TYPE MATERIAL EXAMINED: *Ancyrophorus japonicus* – HOLOTYPE (♀): "(Mt. Ooyama) [*+35.44/+139.23*]; Kanagawa; May 5th 1960; Y. Shibata Leg \ {Holotype}; *Ancyrophorus japonicus*; Y. Watanabe; et Y. Shibata, 1961" (coll. Watanabe).

OTHER MATERIAL: **JAPAN:** Tokyo, Okutama-gun, Mitake *+35.80/+139.18*, 29.IV.1937, leg. Y. Yano, coll. Cameron, BMNH (1). – Kyoto pref., Mt. Daihi *+35.24/+135.80*, 30.IV.1987, leg. T. Ito, coll. Ito (1). – Yamato [Nara pref.], Dorogawa *+34.27/+135.88*, 2.V.1976, leg. T. Ito, coll. Ito (1). – Hyogo pref., Akazai[-keikoku]



FIGS 149-153

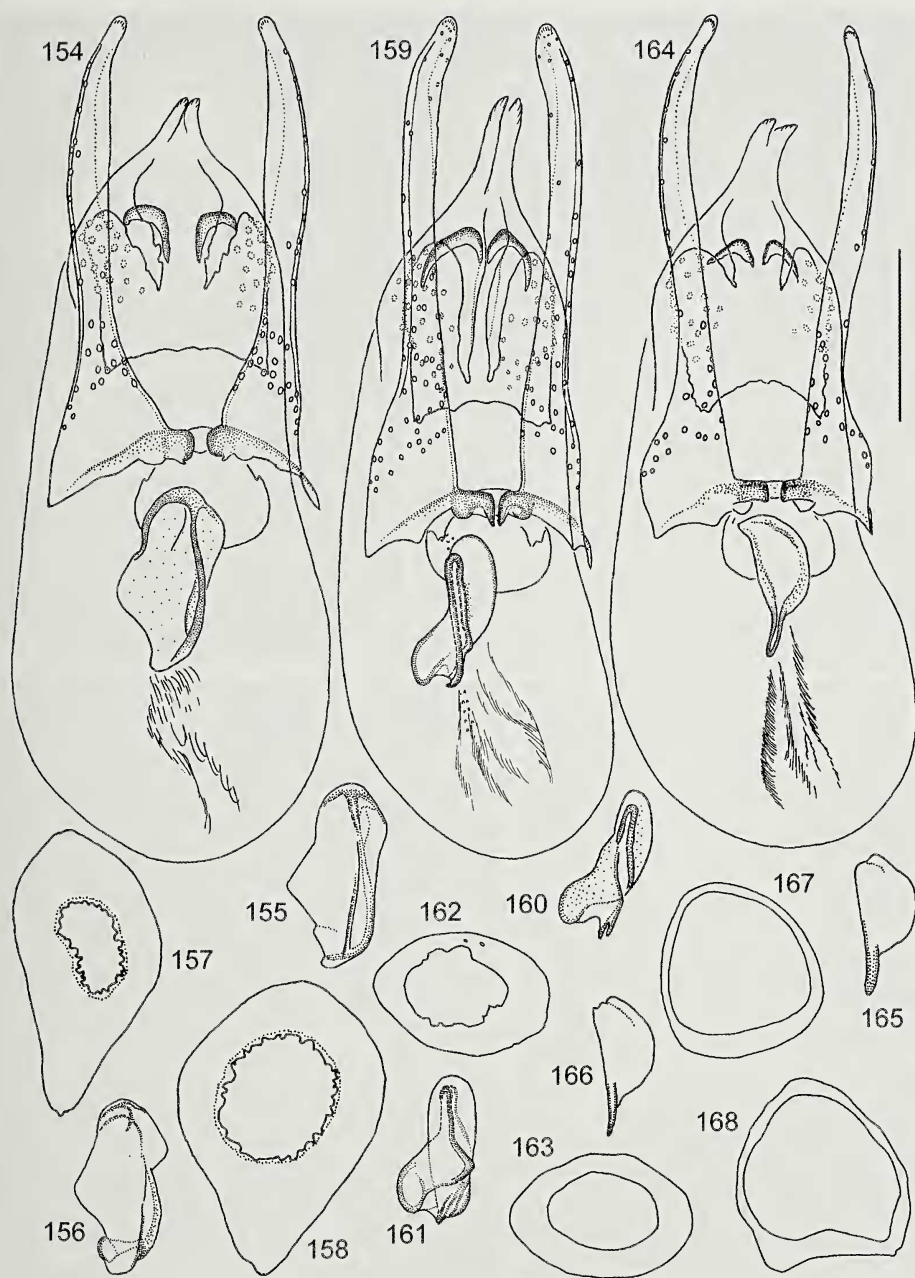
Tergites X; *Ochtheophilus sericinus* (Solsky), ♀ (149), *O. davidi* sp. n., ♂ (150), same, ♀ (151), *O. tibetanus* sp. n., ♂ (152), same, ♀ (153). Scale bar = 0.1 mm for 150-153, 0.115 mm for 149.

+35.22/+134.48, 5.V.1981, leg. T. Ito, coll. Ito (1♂), HNHM (1♂), NHMW (1♂). – Kii [Wakayama pref.], Mt. Koya *+34.22/+135.57*, 2.V.1968, leg. T. Ito, coll. Ito (1♀), MHNG (1). – Kyoto pref., Kibune *+35.12/+135.78*, 29.IV.1960, leg. K. Ueda, coll. Ito (1♂), HNHM (1♀).

REDESCRIPTION: Forebody as in Fig. 521. Measurements (n=10): HW = 0.71 (0.69-0.74); TW = 0.64 (0.61-0.67); PW = 0.76 (0.74-0.81); SW = 1.03 (0.98-1.12); AW = 1.11 (1.04-1.16); HL = 0.53 (0.52-0.56); EL = 0.23 (0.22-0.24); TL = 0.13 (0.12-0.14); PL = 0.65 (0.62-0.71); SL = 1.23 (1.18-1.30); SC = 1.10 (1.04-1.16); FB = 2.48 (2.38-2.66); BL = 4.44 (4.02-4.70) mm. Head, pronotum and abdomen slightly reddish dark brown, elytra often the same but occasionally lighter, more reddish. Legs, mouth-parts and antennae reddish dark brown, mid-tibiae and femora darker in case of sometimes lighter legs. Body with moderate lustre due to very dense elytral setation and fine but dense punctation all over. Pubescence medium short and medium dense, much shorter and more dense on elytra, longer and much sparser on abdomen. Elytral apex with a few larger setae near sutural corners. Last tarsomere moderately setose (Fig. 115).

Forebody. Antenna as in Fig. 116, antennomere 7 (and in lesser extent article 8) asymmetrically swollen (Fig. 117) on one side. Clypeus (Fig. 147) shallowly and sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with feeble, oblique impressions in middle almost joining in V-shape. Temples (Fig. 114) slightly bulging, evenly curved, little longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' rather weakly formed, more apparent in longitudinal midline as an elevated, impunctate, unsculptured (shinier) line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In the corners of the anchor slight elongate impressions directed outwards. Elytra (Fig. 148) slightly broadening posteriorly, sutural corners broadly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in



FIGS 154-168

(154-158) *Ochtheophilus biimpressus* (Mäklin); aedeagus (154), inner sclerites (155-156), female ringstructures (157-158). (159-163) *O. solodovnikovi* Gildenkov; aedeagus (159), inner sclerites (160-161), female ringstructures (162-163). (164-168) *O. lenkoranus* (Scheerpeltz); aedeagus (164), inner sclerites (165-166), female ringstructures (167-168). Scale bar = 0.07 mm for 157-158, 0.075 mm for 162-163, 0.09 mm for 167-168, 0.1 mm for 154-156, 164-166, 0.135 mm for 159-161.

middle; in females slightly more sinuate (convex) in middle. Tergite X not conspicuously modified, apex broader in males (Fig. 125) more narrow in females (Fig. 126). Aedeagus as in Fig. 79, inner sclerites as in Figs 80-81. Female ringstructures as in Figs 82-83.

COMPARATIVE NOTES: *O. japonicus* is quite an outlier in the *O. emarginatus* group, for its less emarginate apex of tergite X and mainly for features in the legs: the less hairy last tarsomere, the row of tubercles on the inner side of metatibia and the tuberculate base of metafemur. The latter feature (Fig. 115, with arrow to the tubercle) is expressed with various strength throughout males of both the *O. angustatus* and *O. emarginatus* groups, very often this tubercle is barely noticeable. A similar modification exists in males of *Thinobius procerus* Eppelsheim, 1893, where a spine is formed in the middle of the hind edge of metafemur (Makranczy, 2014, Fig. 10).

DISTRIBUTION: The species is so far known only from Japan.

BIONOMICS: No bionomical details are recorded with any of the known specimens, but localities indicate they were collected at streambanks, possibly from wet moss.

***Ochtheophilus sericinus* (Solsky, 1874)** Figs 96-100, 122-124, 129, 145-146, 149, 520

Ancyrophorus sericinus Solsky, 1874: 206. – Scheerpeltz, 1950: 56.

Ochtheophilus sericinus (Solsky). – Herman, 1970: 385.

Psilotrichus elegans Luze, 1904: 70, **syn. nov.**

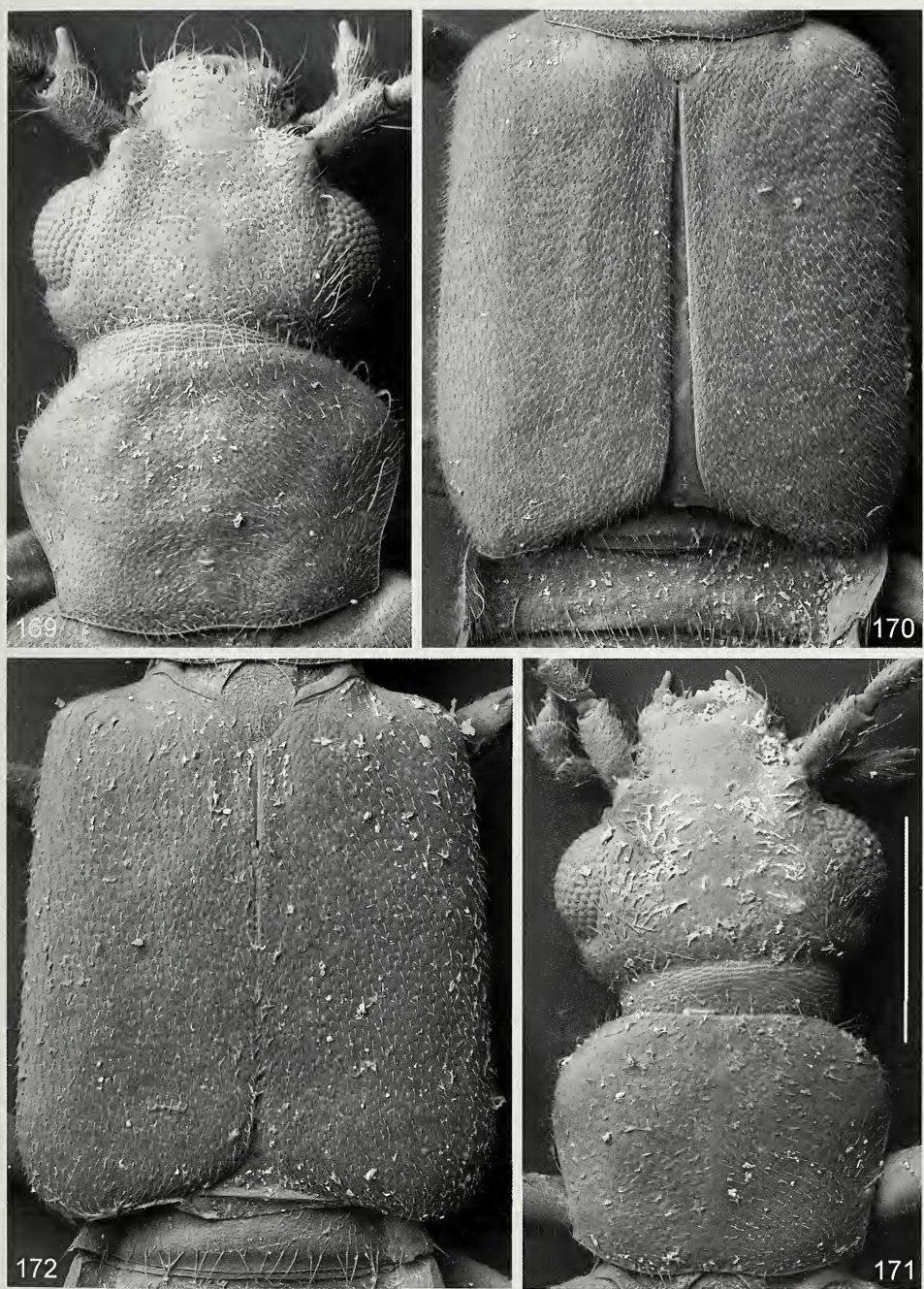
Ancyrophorus (Misancyrus) kerzhneri Kashcheev, 1989: 279, **syn. nov.**

Ancyrophorus (Misancyrus) gvosdevi Kashcheev, 1999: 150, **syn. nov.**

TYPE MATERIAL EXAMINED: *Ancyrophorus sericinus* – HOLOTYPE: “1. \ к. Сольскаго \ Туркестан, Kokand [$+40.53/+70.94^*$], 2.VII.1871, leg. Fedtschenko \ Holotypus; *Ancyrophorus*; *sericinus* Solsky \ *Ochtheophilus*; *sericinus* Solsky; det. Makranczy, 1999” (ZISP). *Psilotrichus elegans* – HOLOTYPE: “Seravschan [Зеравшан range], Fl. Magian [Магиан river] [$+39.29/+67.83^*$], 1892, leg. Glasunov” (NHMW). *Ancyrophorus kerzhneri* – HOLOTYPE: “Монголия, Баян-Хонгорский аймак, река Байдраг-Гол, 30км С Ба-Цагана [$+45.75/+99.38^*$], 10.VII.1970 (Кержнер leg.)” (ZISP). – PARATYPE (1): “Монголия, Южно-Гобийский аймак, хребет Гурван-Сайхан, 40км З Далан-Дзадагад [$+43.50/+104.00^*$], 28.VIII.1969 (Гурьева leg.)” (ZISP). *Ancyrophorus gvosdevi* – HOLOTYPE (δ): “[Джунгарский Алатау, р.] Борохудзир [$+44.50/+79.50^*$], 31.VIII.1988 [leg.] В. Кашеев” (ZISP). – PARATYPE (1): same data as holotype (ZISP, 1♀).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 520. Measurements ($n=10$): HW = 0.64 (0.60-0.69); TW = 0.57 (0.53-0.62); PW = 0.70 (0.65-0.75); SW = 0.91 (0.81-1.00); AW = 1.02 (0.92-1.10); HL = 0.50 (0.46-0.53); EL = 0.24 (0.23-0.26); TL = 0.09 (0.7-0.10); PL = 0.55 (0.51-0.60); SL = 1.10 (1.00-1.22); SC = 1.01 (0.93-1.14); FB = 2.24 (2.04-2.49); BL = 3.95 (3.57-4.44) mm. Head, pronotum and elytra blackish dark brown with reddish tint. Elytra dark brown, blackish around scutellum to shoulders, but in the middle of disc with a lighter spot, usually not as extensive and not as light as in case of *O. emarginatus*; if middle lighter a broad stripe at apex remaining dark, blackish as well as around scutellum and shoulders. Legs, mouthparts and antennae reddish medium to dark brown, basal antennomeres often somewhat lighter. Body with moderate lustre due to very dense elytral setation and fine but dense punctation all over. Pubescence medium short and medium dense, much shorter and more dense on



FIGS 169-172

(169-170) *Ochtheophilus davidi* sp. n.; head and pronotum (169), elytra (170). (171-172) *O. tibetanus* sp. n.; head and pronotum (171), elytra (172). All SEM, dorsal views. Scale bar = 0.42 mm for 169, 171, 0.5 mm for 170, 172.

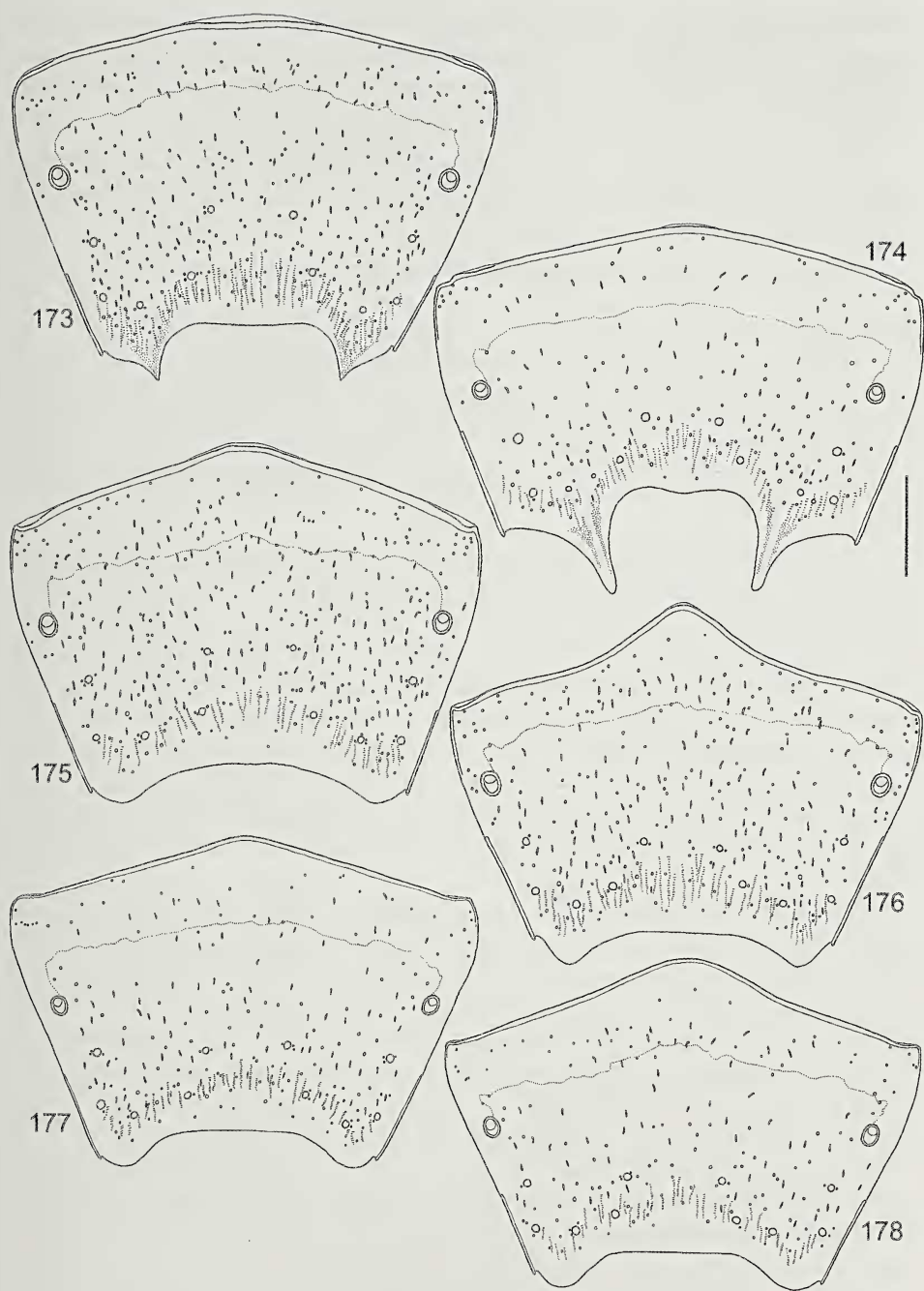
elytra, longer and much sparser on abdomen. Elytral apex without conspicuous setae. Last tarsomere rather densely (and finely) setose (Fig. 124).

Forebody. Antenna as in Fig. 122, antennomere 7 (and in lesser extent article 8) asymmetrically swollen on one side. Clypeus (Fig. 145) finely and sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with a pair of very shallow impressions in middle. Temples slightly bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, setose in midline (Fig. 123). Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' weakly formed, more apparent in longitudinal midline as an elevated, impunctate, unsculptured (shinier) line, other parts barely discernible. Elytra (Fig. 146) slightly broadening posteriorly, sutural corners broadly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head fine, sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X modified, apex with quite a few, but moderately deep emarginations, broader in males (Fig. 129) more narrow in females (Fig. 149). Aedeagus as in Fig. 96, inner sclerites as in Figs 97-98. Female ringstructures as in Figs 99-100.

COMPARATIVE NOTES: This species is related to the similarly coloured *O. emarginatus*, but with much shorter antenna and somewhat smaller body size. It can be easily separated from all other congeners by the setose last tarsomere and densely setose body. It is unknown whether the distribution range approaches to or overlaps with that of *O. tibetanus*, but the latter species has much more slender body with more elongate (and uniformly dark) elytra.

NOTES: According to the original description the length of the body is 3.5 mm, elytra is 1.2 mm long and 1.0 mm wide. The main evidence of Solsky's specimen being the holotype is Solsky's original box (seen and photographed by me), which had only one pinhole under the name "*Ancyrophorus*". The specimen has long been removed



FIGS 173-178

Tergites VIII; *Ochtheophilus aureus* (Fauvel) (173), *O. californicus* sp. n. (174), *O. solodovnikovi* Gildenkov, ♂ (175), same, ♀ (176), *O. lenkoranus* (Scheerpeltz), ♂ (177), same, ♀ (178). Scale bar = 0.1 mm for 174, 0.115 mm for 177-178, 0.13 mm for 173, 175-176.

from this box) has only a yellow label with horizontal red line in the middle and printing: "1." plus a Solsky collection label attached by a later curator. Another supporting fact is that this is an unusually small specimen of this species, and comes reasonably close to the measurements given in the original description.

DISTRIBUTION: Known from Transcaucasia through Central Asia (including Afghanistan) to the northwestern areas of China. In Central Asia it is quite common and dominant species of this genus.

BIONOMICS: Specimens were collected near river, under stones.

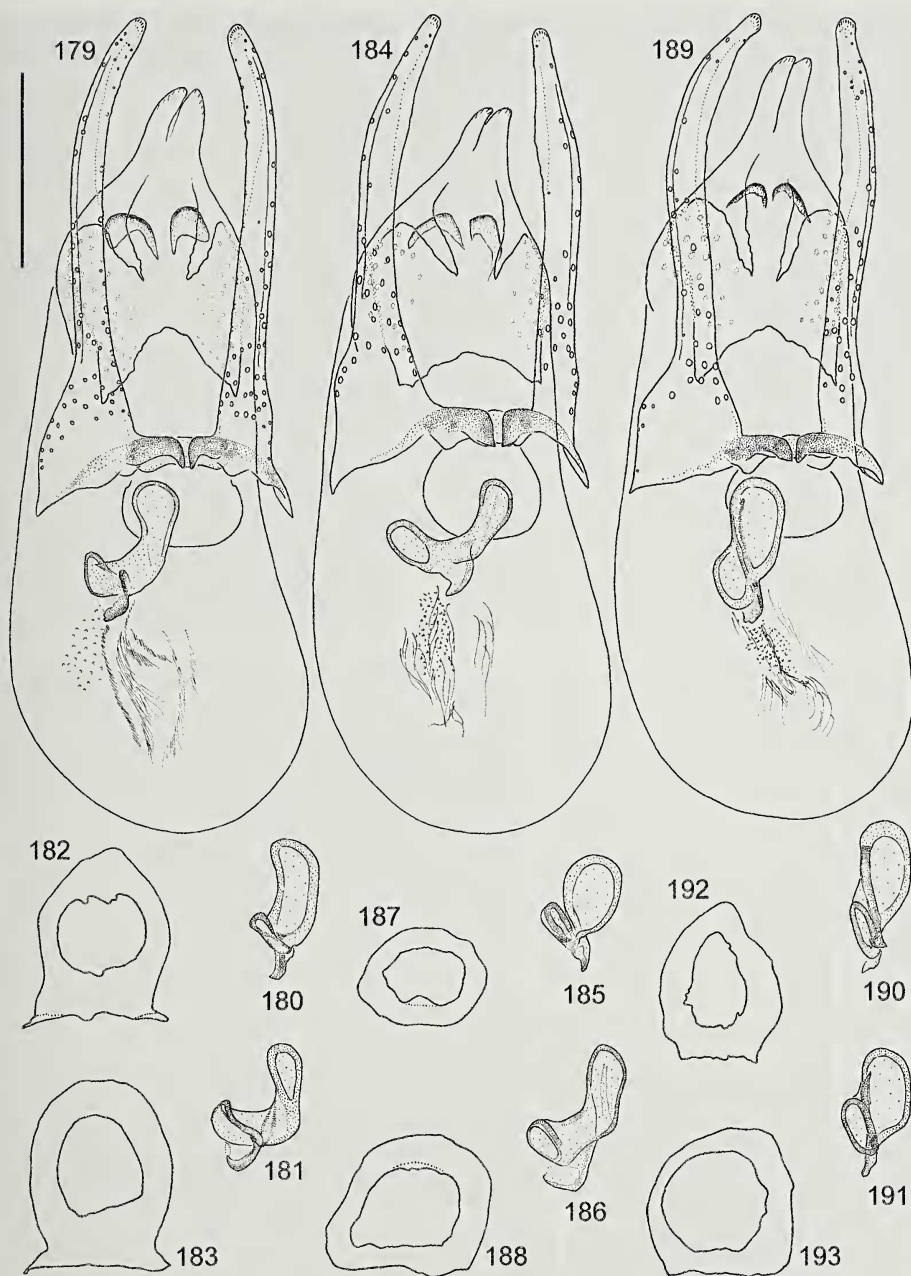
***Ochtheophilus tibetanus* sp. nov.**

Figs 101-105, 120-121, 152-153, 171-172

TYPE MATERIAL: HOLOTYPE (♂): "CHINA: TIBET[=XIZANG]: Shigatse, Tsangpoufer, 3900m, 29°15'43.6" N, 88°52'09.3" E, 31.VII.1998, leg. O. Jäger" (SMTD). – PARATYPES (12): same data as holotype (SMTD, 4♀, MHNG, 1, NHMW, 1♀). – "Zhalangxian [Zhanang Co.] [+29.25/+91.34], 3600m, 14.VIII.1960, leg. C.-G. Wang" (IZAS, 1♂, 1♀, 1). – "Lhasa [+29.65/+91.14], 3660m, 3.V.1960, leg. C.-G. Wang" (IZAS, 1); same but 15.V.1960 (IZAS, 1). – "Mozhugongkaxian [Maizhokunggar Co.] [+29.83/+91.73], 5.VII.2002, leg. Y.-B. Ba & Y. Yu" (IZAS, 1).

DESCRIPTION: Measurements (n=10): HW = 0.63 (0.61-0.65); TW = 0.54 (0.52-0.56); PW = 0.64 (0.62-0.68); SW = 0.90 (0.84-0.99); AW = 0.99 (0.90-1.06); HL = 0.48 (0.46-0.52); EL = 0.22 (0.21-0.23); TL = 0.10 (0.08-0.10); PL = 0.52 (0.50-0.54); SL = 1.16 (0.12-1.20); SC = 1.06 (1.00-1.15); FB = 2.23 (2.12-2.32); BL = 3.78 (3.20-4.00) mm. Head, pronotum and abdomen blackish dark brown, elytra dark brown with a broad stripe at apex slightly more blackish as well as scutellar area to shoulders. Antennae, mouthparts and legs dark brown, middle of tibiae darker than both ends. Body with moderate lustre due to very dense elytral setation and fine but dense punctation all over. Pubescence short and sparse, but abdomen with much longer setae. Elytral apex without conspicuous setae. Last tarsomere rather densely (and finely) setose.

Forebody. Antenna as in Fig. 121, antennomere 7 (and in lesser extent article 8) asymmetrically swollen on one side. Clypeus (Fig. 171) sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 120) slightly bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in the posterior 2/3 very gently concave. 'Anchor' rather weakly formed, more apparent in the longitudinal midline as an elevated, impunctate, unsculptured (shinier) line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In the corners of the anchor slight elongate impressions directed outwards. Elytra (Fig. 172) slightly broadening posteriorly, sutural corners broadly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate



FIGS 179-193

(179-183) *Ochtheophilus legrosi* (Jarrige); aedeagus (179), inner sclerites (180-181), female ringstructures (182-183). (184-188) *O. tatricus* (Smetana); aedeagus (184), inner sclerites (185-186), female ringstructures (187-188). (189-193) *O. brachypterus* (Jeannel & Jarrige); aedeagus (189), inner sclerites (190-191), female ringstructures (192-193). Scale bar = 0.05 mm for 187-188, 192-193, 0.06 mm for 182-183, 0.1 mm for 184-186, 0.13 mm for 179-181, 189-191.

impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X modified, apex with a few, moderately deep emarginations, broader in males (Fig. 152) more narrow in females (Fig. 153). Aedeagus as in Fig. 101, inner sclerites as in Figs 102-103. Female ringstructures as in Figs 104-105.

ETYMOLOGY: The species is named after the locality of the known specimens.

COMPARATIVE NOTES: This is currently the only species known from Tibet. From its closest relatives it can be separated by its slender body and particularly elongate elytra. A similar species (with uniformly dark body) is *O. japonicus*, currently only known from Japan. Distribution range can come close to that of *O. davidi*, from which it can be separated by genital features.

DISTRIBUTION: At present known from Tibet, where it does not seem to be rare.

BIONOMICS: No bionomical data are recorded for any of its known specimens, the locality records suggest occurrence on streambanks.

IV. *Ochtheophilus aureus* species group

***Ochtheophilus aureus* (Fauvel, 1871)**

Figs 106-110, 173, 522, 575

Ancyrophorus aureus Fauvel, 1871: 168 [=1872: 142]. – Ganglbauer, 1895: 669. – Jeannel & Jarrige, 1949: 325. – Scheerpeltz, 1950: 58. – Fagel, 1951b: 7 – Smetana, 1967: 385.

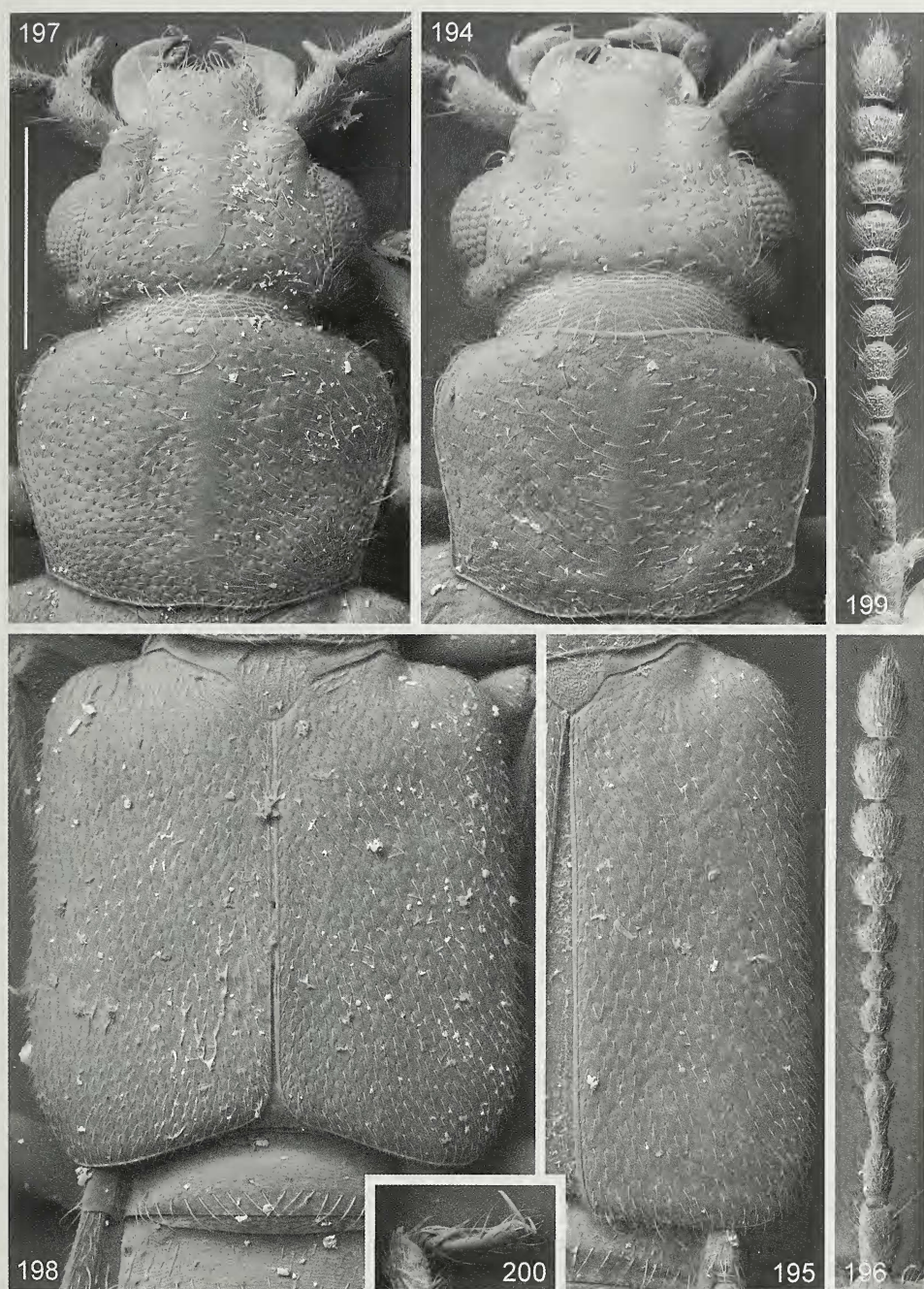
Ochtheophilus aureus (Fauvel). – Mulsant & Rey, 1878: 802. – Herman, 1970: 384. – Bourne, 1975: 233. – Pope, 1977: 24. – Makranczy, 2001: 178. – Bruge, 2007: 94. – Lott, 2008: 18.

Ochtheophilus oblitus Mulsant & Rey, 1878: 704.

Ancyrophorus aureus var. *ruficornis* Reitter, 1909: 175.

Ancyrophorus lucifugus Fagel, 1951a: 2.

TYPE MATERIAL EXAMINED: *Ancyrophorus aureus* – LECTOTYPE (here designated): “Corse \ Fauvel Type [printed, probably curator label] \ aureus \ G. Fagel det., 1962; *Ancyrophorus*; aureus Fauv. \ Lectotypus; *Ancyrophorus*; aureus Fauvel; [on the back] des. Makranczy, 1999 \ *Ochtheophilus*; aureus Fauvel; det. Makranczy, 1999” (ISNB). – PARALECTOTYPE (1): “Corse (grayish, probably faded disc) \ Fauvel (dark greenish disc) \ 4450 (white disc) \ P. de Borre. \ Paralectotypus; *Ancyrophorus*; aureus Fauvel; [on the back] des. Makranczy, 1999 /



FIGS 194-200

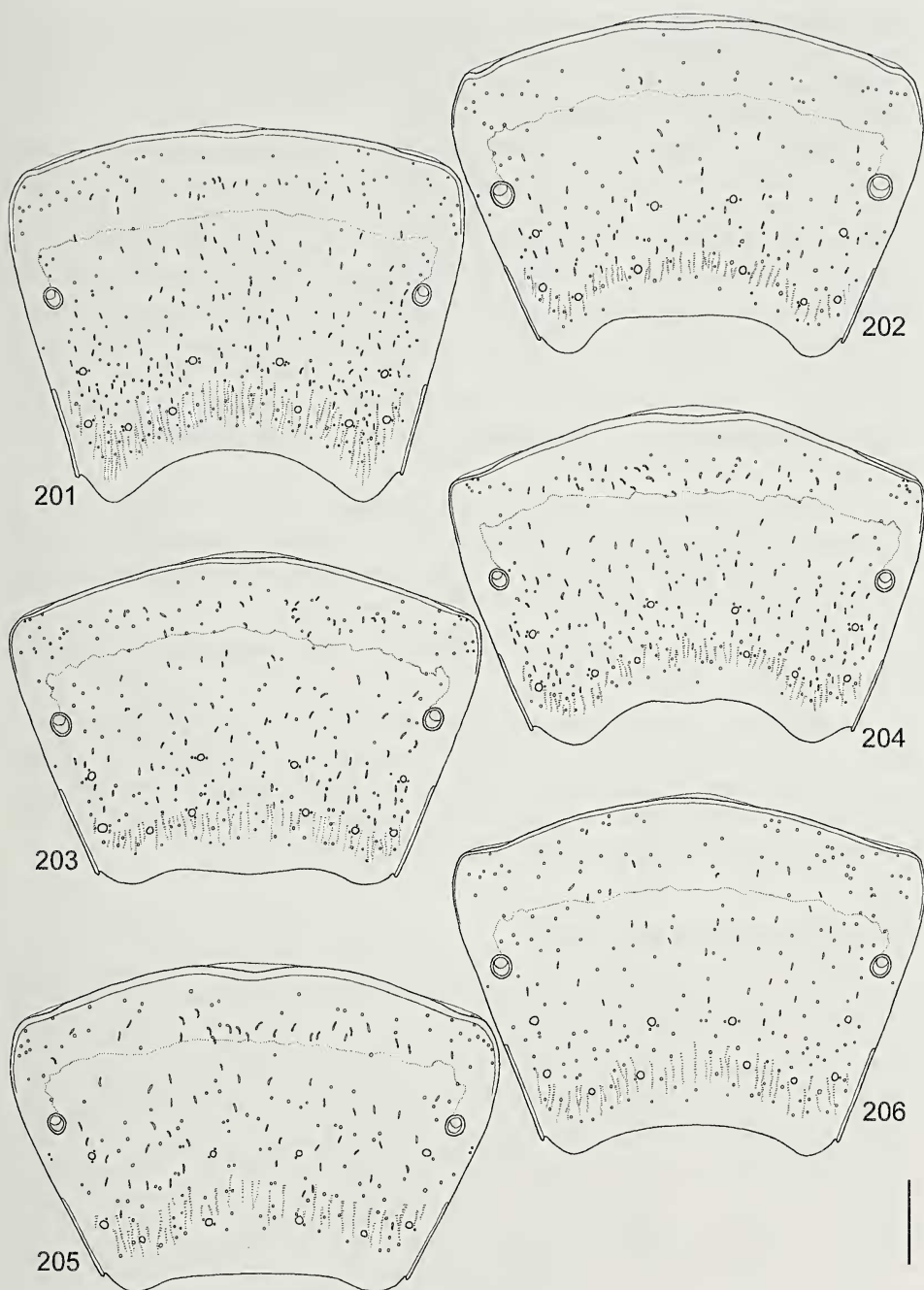
(194-196) *Ochtheophilus californicus* sp. n.; head and pronotum (194), elytron (195), antenna (196). (197-200) *O. laevis* (Watanabe & Shibata); head and pronotum (197), elytron (198), antenna (199), protarsus (200). All SEM, dorsal views. Scale bar = 0.35 mm for 194, 0.42 mm for 195-196, 200, 0.5 mm for 197-198, 0.6 mm for 199.

Ochtheophilus; aureus Fauvel; det. Makranczy, 1999" (MHNG, 1). *Ancyrophorus aureus* var. *ruficornis* – SYNTYPE: "Görz. [Gorizia] \ coll. Reitter \ aureus; v. ruficornis [in Reitter's handwriting] \ Ancyrophorus; v. ruficornis Rtt.; det. Székessy \ Holotypus; Ancyrophorus aureus; v. ruficornis Reitter \ Syntypus; Ancyrophorus aureus; var. ruficornis Reitter \ Ochtheophilus; aureus Fauvel; det. Makranczy, 1999" (HNHM, 1). – SYNTYPE: "Görz. [Gorizia] \ Paratypus; Ancyrophorus aureus; v. ruficornis Reitter \ Syntypus; Ancyrophorus aureus; var. ruficornis Reitter \ Ochtheophilus; aureus Fauvel; det. Makranczy, 1999" (HNHM, 1). *Ancyrophorus lucifugus* – HOLOTYPE: "Belgique, vallée de la Lesse, grotte de Han, VIII.1945., leg. N. Leleup" (ISNB). – PARATYPE (3): same data as holotype (ISNB). *Ochtheophilus oblitus* – LECTOTYPE (here designated): "[little green disc] \ "3" \ Bugey (Ain) \ Lectotypus; Ochtheophilus; oblitus Mulsant & Rey; [on the back] des. Makranczy, 1999 \ Ochtheophilus; aureus Fauvel; det. Makranczy, 1999" (MHNL).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 522. Measurements (n=10): HW = 0.62 (0.57-0.65); TW = 0.56 (0.51-0.59); PW = 0.71 (0.65-0.76); SW = 0.90 (0.81-0.97); AW = 0.97 (0.87-1.17); HL = 0.47 (0.43-0.50); EL = 0.20 (0.19-0.22); TL = 0.10 (0.09-0.12); PL = 0.57 (0.53-0.60); SL = 1.14 (1.02-1.25); SC = 1.05 (0.93-1.13); FB = 2.23 (2.04-2.36); BL = 4.02 (3.41-4.35) mm. Head and pronotum blackish dark brown with occasional reddish tint, pronotum reddish dark brown, elytra reddish medium to dark brown, scutellar area to shoulders darker, blackish. Legs reddish medium to dark brown, mouthparts and antennae reddish dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with at least two rather long setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 575. Clypeus sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge arched; separated by slightly impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, separated from clypeus/vertex by longitudinal impressions. Vertex with small but deep impressions in middle almost joining in V-shape. Temples bulging, evenly curved, about as long as half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger and less fine than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, fully visible in anterior corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in the posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface with two shallow, oval impressions behind scutellum and slightly impressed anterior disc. Head with fine coriaceous/colliculate microsculpture (isodiametric cells), fading on elevated parts, stronger in impressions, on pronotum microsculpture somewhat stronger. Punctation on head generally sparse, from fine to rather coarse and deep, much stronger at sides



FIGS 201-206

Tergites VIII; *Ochtheophilus laevis* (Watanabe & Shibata) (201), *O. tatricus* (Smetana) (202), *O. brachypterus* (Jeannel & Jarrige) (203), *O. legrosi* (Jarrige) (204), *O. biimpressus* (Mäklin) (205), *O. flexuosus* Mulsant & Rey (206). Scale bar = 0.11 mm for 203, 0.115 mm for 201, 204.

and in impressions, on pronotum more evenly spaced, average interspaces somewhat larger than puncture diameters; elytral punctation more coarse and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures sometimes slightly confluent.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 173) basal edge evenly arched, but straight at a short distance in middle of basal sclerotized band; apical edge with strongly protruding corners formed as rather sharp spikes, with a broad and deep emargination in between. Sternite VIII with rounded apical corners, apex in males quite truncate (straight or very slightly arched, concave); in females with a tiny sinuate (convex) part in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 106, inner sclerites as in Figs 107-108. Female ring-structures as in Figs 109-110.

COMPARATIVE NOTES: By the unique formation of tergite VIII this species is only similar to the New World *O. californicus*, but the spiky posterior corners of tergite VIII are more distant from each other and the emargination in between more shallow, as a consequence the spikes appear somewhat shorter.

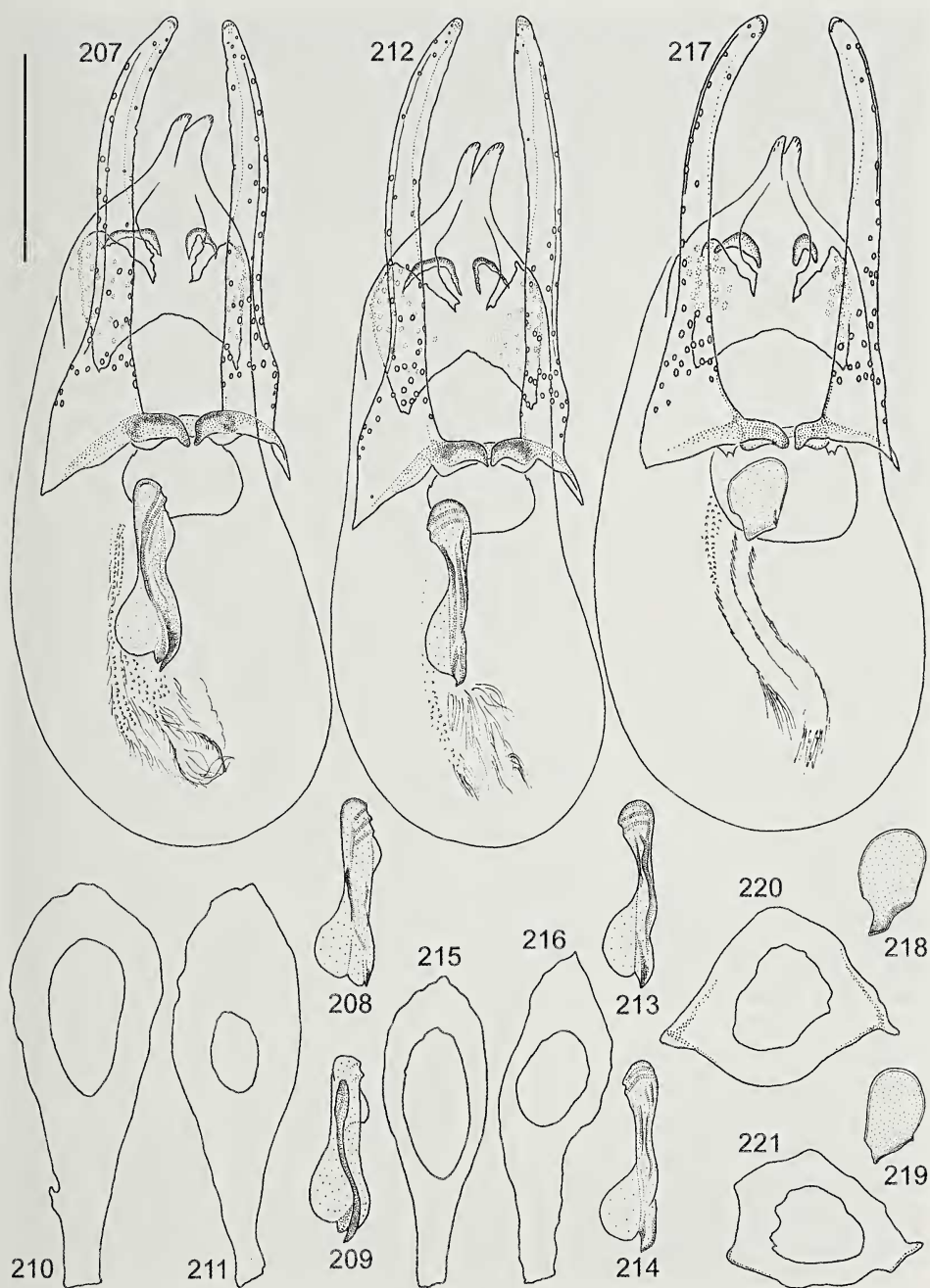
DISTRIBUTION: Known from Northern Africa (Atlas Mountains), from Western Europe through the Balkans to Turkey.

BIONOMICS: This species is very frequently found near or in caves, even in the dark zone; also deep, dark ravines. Collected from bank of lake, under or near waterfall, streambank sand and gravel, both from clay on bank of smaller rivers and larger rivers with fine sandy banks, vegetable debris on streambank, leafpacks at streams, flood debris, under wet stones at water and also captured by car-net.

***Ochtheophilus californicus* sp. nov.**

Figs 8, 130-134, 174, 194-196, 222

TYPE MATERIAL: HOLOTYPE (♂): "USA: CALIFORNIA: Willow Creek (Humboldt Co.) [*+40.94/-123.63*], 15.VI.1916, leg. F. E. Blaisdell" (coll. Blaisdell, CASC). – PARATYPES (58): same data as holotype (coll. Blaisdell, CASC, 3). – "Samuel P. Taylor State Park (Marin Co.) [*+38.03/-122.73*], 16.V.1952, leg. H. B. Leech" (CASC, 5, USNM, 1♂, MNHP, 1♀). – "Marin Co., Lagunitas Creek nr. Tocaloma [*+38.05/-122.75*], 18.III.1983, leg. A. Smetana" (CNCI, 1). – "Lagunitas (Marin Co.) [*+38.02/-122.67*], 14.VI.1908" (coll. Van Dyke, CASC, 1). – "Sonoma (Sonoma Co.) [*+38.25/-122.45*], 29.IV.1950, leg. H. B. Leech" (CASC, 5). – "Pasadena (Los Angeles Co.) [*+34.17/-118.07*], I.1897" (coll. Fenyes, CASC, 2). – "Pasadena (Los Angeles Co.) [*+34.17/-118.07*], II.1897" (coll. Fenyes, CASC, 2). – "Pasadena (Los Angeles Co.) [*+34.17/-118.07*], XII.1897" (coll. Fenyes, CASC, 2). – "Pasadena (Los Angeles Co.) [*+34.17/-118.07*]" (coll. Fenyes, CASC, 1, BMNH, 1, SMNS, 1, ISNB, 1). – "Los Angeles Co. (Pasadena?) [*+34.17/-118.07*]" (coll. Fuchs via E. R. Leach, CASC, 1). – "Mendocino Co., Rancheria Creek, 5.5mi SE Boonville [*+38.03/-122.73*], 15.VI.1950, leg. H. B. Leech" (CASC, 1). – "Ventura Co, 8mi N Ojai, North Fork Matilija Creek, 2000ft [*+34.52/-119.27*], 21.V.1981, L. Herman (1863), moss on rocks in stream" (AMNH, 1). – "Del Norte Co., Ruby Van Deventer Co. Pk., ca. 6mi SE Smith River, 250' [*+41.86/-124.11*], 3-5.VII.1975, leg. A. Newton & M. Thayer, stream edge" (FMNH, 1). – "ARIZONA: Yavapai Co., Camp Verde, Verde River [*+34.57/-111.85*], 6.IV.1966, leg. J. Schuh" (AMNH, 1). – "OREGON: Curry Co., Pistol River [*+42.28/-124.39*], 21.VI.1953, leg. B. Malkin" (coll. Malkin, FMNH,



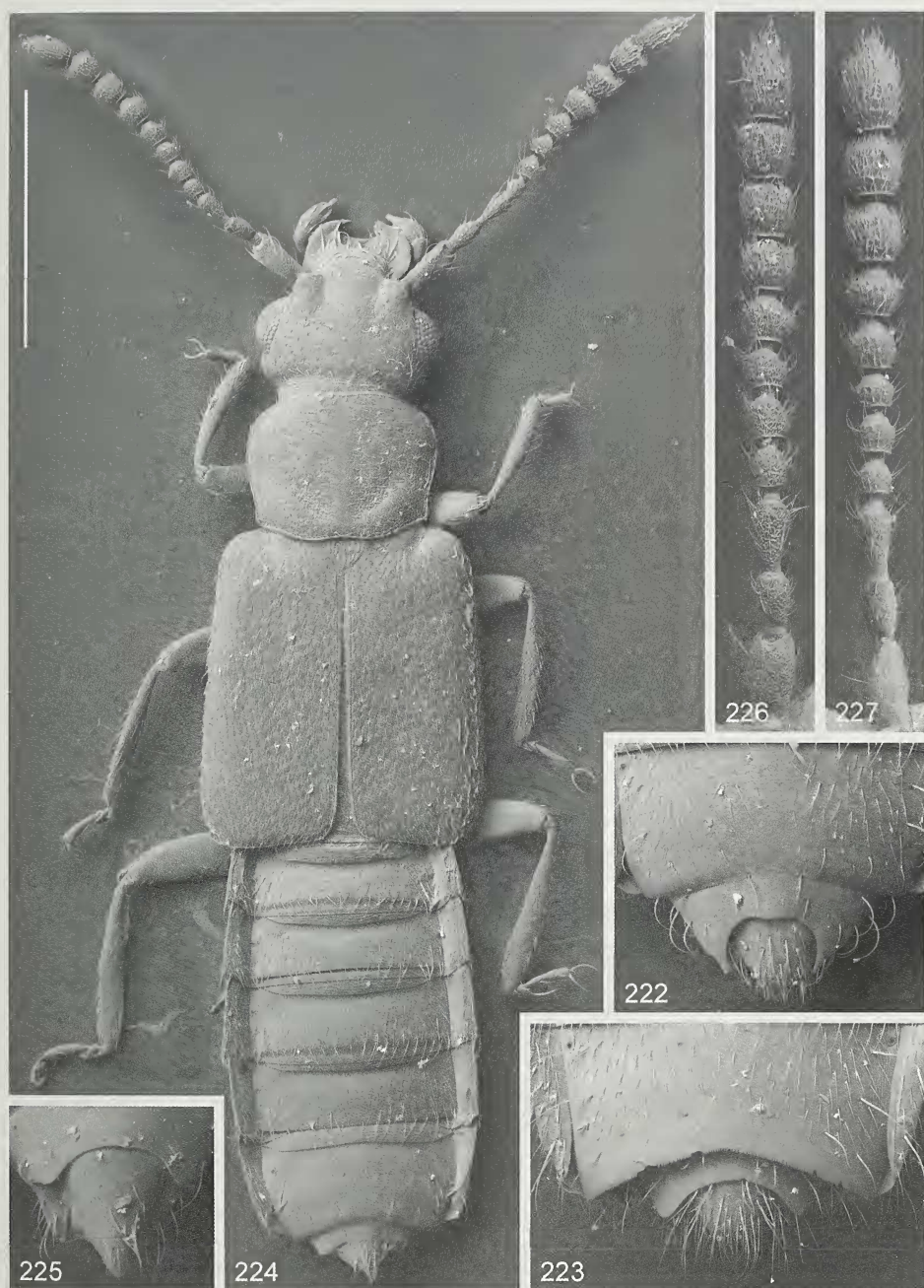
FIGS 207-221

(207-211) *Ochtheophilus praepositus* Mulsant & Rey; aedeagus (207), inner sclerites (208-209), female ringstructures (210-211). (212-216) *O. rosenhaueri* (Kiesenwetter); aedeagus (212), inner sclerites (213-214), female ringstructures (215-216). (217-221) *O. planus* (LeConte); aedeagus (217), inner sclerites (218-219), female ringstructures (220-221). Scale bar = 0.055 mm for 220-221, 0.1 mm for 210-211, 215-216, 0.14 mm for 207-209, 212-214, 217-219.

1). – “Douglas Co., 2w Scottsburg [$+43.65/-123.85^*$], 1.V.1962, leg. J. Schuh, under rocks” (AMNH, 2). – “Klamath Co., Rocky Point [$+42.48/-122.08^*$], 4.IX.1961, leg. J. Schuh, mud, bank” (AMNH, 1). – “WASHINGTON: North Bend (King Co.) [$+47.47/-121.65^*$], 11.VII.1920” (CASC, 6). – “CANADA: BRITISH COLUMBIA: Queen Charlotte Is., 6km NE Rennell Sound, Bonanza Creek [$+53.38/-132.36^*$], 4.VIII.1983, leg. J.M. Campbell, sifting moss along stream” (CNCI, 2 ♀, 3, MSNV, 1, NHMW, 1 ♂, MHNG, 1 ♂, HNHM, 1, SEMC, 1, ZMHB, 1). – “Queen Charlotte Is., 4.7km N Rennell Sound Rd., Ghost Creek, 700ft [$+53.37/-132.33^*$], 19.VII.1983, leg. J.M. Campbell (83-24), ex gravel along edge of stream” (CNCI, 2). – “Cayuse, Nixon Creek [$+50.92/-120.80^*$], 17-18.VI.1979, leg. I. Smith, sweeping” (CNCI, 3).

DESCRIPTION: Measurements ($n=10$): HW = 0.54 (0.49-0.57); TW = 0.48 (0.45-0.51); PW = 0.60 (0.55-0.64); SW = 0.77 (0.68-0.82); AW = 0.80 (0.70-0.90); HL = 0.39 (0.36-0.42); EL = 0.18 (0.16-0.19); TL = 0.07 (0.06-0.08); PL = 0.49 (0.44-0.52); SL = 1.05 (0.92-1.14); SC = 0.96 (0.82-1.04); FB = 1.94 (1.78-2.06); BL = 3.38 (3.02-3.80) mm. Head blackish dark brown, pronotum and abdomen dark brown with reddish tint. Elytra reddish dark brown with occasional lighter, slightly yellowish/ochre spots (outer halves in central half of elytral length) leaving scutellar area to shoulders and along suture dark, blackish. Legs reddish dark brown, mouthparts and antennae dark brown with reddish tint. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with 2-3 rather long setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 196. Clypeus (Fig. 194) sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge arched; separated by slightly impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, separated from clypeus/vertex by longitudinal impressions. Vertex with small but deep impressions in middle almost joining in V-shape. Temples bulging, evenly curved, about as long as half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger and less fine than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, fully visible in anterior corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in the posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 195) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface with two shallow, oval impressions behind scutellum and middle of disc gently impressed all the way. Head with fine and shallow coriaceous microsculpture (isodiametric cells), even more fading on elevated parts, stronger in impressions, on pronotum microsculpture somewhat stronger. Punctation on head generally sparse, from fine to rather coarse and deep, much stronger at sides and in impressions, on pronotum more evenly spaced, average interspaces somewhat larger than puncture diameters; elytral punctation more



FIGS 222-227

(222) *Ochtheophilus californicus* sp. n.; apices of tergites VII, VIII and X. (223) *O. laevis* (Watanabe & Shibata); apices of tergites VII, VIII and X. (224-225) *O. angustior* (Bernhauer); habitus (224), apices of tergites VIII and X (225). (226) *O. legrosi* (Jarrige); antenna. (227) *O. incognitus* sp. n.; antenna. All SEM, dorsal views. Scale bar = 0.38 mm for 225, 227, 0.5 mm for 222, 0.6 mm for 223, 0.65 mm for 226, 0.7 mm for 224.

coarse and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures sometimes slightly confluent.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe (Fig. 222) unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 174) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with strongly protruding corners formed as rather sharp spikes, with a broad and deep emargination in between. Sternite VIII with rounded apical corners, apex in males quite truncate (straight or very slightly arched, concave); in females with a tiny sinuate (convex) part in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 130, inner sclerites as in Figs 131-132. Female ring-structures as in Figs 133-134.

ETYMOLOGY: The species is named after the state (of the USA) from where most of its specimens originate.

COMPARATIVE NOTES: By the unique formation of tergite VIII this species is only similar to the Old World *O. aureus*, but the spiky posterior corners of tergite VIII are closer to each other and the emargination in between deeper (which makes the spikes appear much longer).

DISTRIBUTION: Currently only known from the western areas of North America.

BIONOMICS: Specimens were collected from moss on rocks in and at stream (also by sifting) and gravel and mud along edge of stream.

V. Ochtheophilus laevis species group

Ochtheophilus laevis (Watanabe & Shibata, 1961) Figs 9, 135-139, 197-201, 223, 523

Ancyrophorus laevis Watanabe & Shibata, 1961: 8.

Ochtheophilus laevis (Watanabe & Shibata). – Herman, 1970: 384. – Watanabe, 1996: 9.

TYPE MATERIAL EXAMINED: *Ancyrophorus laevis* – PARATYPES (3): “Mt. Imakuma [*+35.71/+139.22*]; Near-Hachiooji; 25th Sept. 1960; Y. Shibata leg. \ {Paratype}; *Ancyrophorus laevis*; Y.Watanabe; et Y.Shibata, 1961.” (coll. Watanabe, 2♂, 1♀).

OTHER MATERIAL: **RUSSIA**: Primorie, Ussurisky Res., Komarovo-Zapovednoe, 43°38'48"N, 132°20'40"E, 21-27.V.1999. leg. J. Sundukov, coll. Schülke (1). – Лазовский район, 5км 3 Лар, Прямая Падь *+43.38/+133.84*, 15.IX.1998, leg. Б. Катаев, coll. Solodovnikov, ZMUC (1♀), MHNG (1♂), HHNM (1♂, 1♀). – Lazovskiy r., Kordon “Amerika” [r. Perekatnaya] (S20) [43°16'16"N, 134°03'01"E], 18-19.VI.1997, leg. J. Sundukow, coll. Schülke (1). — **CHINA**: JILIN: near Baihe City, Erdao Baihe [below the power plant dam], 650m *+42.47/+128.20*, 17.VIII.1994, leg. M. Jäch (18), NHMW (1). — **SOUTH KOREA**: Gangwon prov., Injegin, Girinmyeon, Jindongri *+37.99/+128.45*, 24.VI.2010, leg. S.-J. Park, light trap, NIBR (1♂) – Gyeongbuk Prov., Cheongsong-eup, Woloi-ri, Mt. Juwangsan, Dalgi falls, 36°26'31.9"N, 129°07'48.7"E, 15.V.2006, leg. T.-K. Kim, near stream, under stone, CNUK (1). — **JAPAN**: Hyogo pref., Akazai[-keikoku] *+35.22/+134.48*, 5.V.1981, leg. T. Ito, coll. Ito (1). – Kyoto pref., Mt. Daihi *+35.24/+135.80*, 20.V.1962, leg. K. Ueda, coll. Ito (1). – Nara pref., Dorogawa *+34.27/+135.88*, 2.V.1976, leg. T. Ito, coll. Ito (1). – Ehime pref., Mt. Odami [yama] *+33.54/+132.85*, 11-13.VI.1981, coll. Naomi, KUEC (1).

REDESCRIPTION: Forebody as in Fig. 523. Measurements (n=10): HW = 0.68 (0.66-0.70); TW = 0.60 (0.59-0.62); PW = 0.78 (0.75-0.81); SW = 0.98 (0.94-1.02);

AW = 1.03 (0.98-1.07); HL = 0.49 (0.43-0.52); EL = 0.245 (0.23-0.255); TL = 0.09 (0.08-0.10); PL = 0.62 (0.60-0.64); SL = 1.16 (1.10-1.20); SC = 1.05 (1.00-1.10); FB = 2.34 (2.20-2.41); BL = 4.16 (3.88-4.41) mm. Body blackish dark brown to pitch black. Head darkest of body parts, legs, mouthparts and antennae blackish dark brown, only first antennomere, tarsi and both ends of tibiae lighter, dark brown. Body rather shiny due to medium dense elytral setation and coarse punctation but larger smooth interspaces. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere moderately setose (Fig. 200).

Forebody. Antenna as in Fig. 199. Clypeus (Fig. 197) sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with two feeble impressions in middle with setigerous pores. Temples bulging, evenly curved, significantly shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in the posterior 2/3 almost straight. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 198) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth) and sternite VII shallowly produced in middle (Fig. 223). Tergite VIII (Fig. 201) basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with gently protruding, narrowly rounded corners and shallow to moderately deep, evenly arched emargination in between. Sternite VIII with rounded apical corners, with apex in males very shallowly emarginate (evenly arched); in females shallowly concave laterally, gently sinuate in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 135, inner sclerites as in Figs 136-137. Female ringstructures as in Figs 138-139.

COMPARATIVE NOTES: This is a rather large sized, shiny species with unusually strong and discrete pronotal punctation. Besides this, by its size (within its distribution range) similar to *O. vulgaris*, *O. planus*, *O. itoi*, and *O. loebli*, although the last two are a bit smaller and with smaller eyes, larger temples. *Ochtheophilus laevis* can be easily separated from *O. vulgaris* by the lack of modified median part of the palisade fringe (present in *O. vulgaris*) and from *O. planus* by its smaller head and less prominent eyes.

DISTRIBUTION: The species is known from Japan and the adjacent coastal areas of Russia, China and Korea.

BIONOMICS: Specimens were collected near stream under stone and at a larger stream in degraded primary forest. It was also captured at light.

VI. *Ochtheophilus praepositus* species group

***Ochtheophilus angustior* (Bernhauer, 1943) Figs 32, 224-225, 232, 239-243, 254-255, 281-282**

Ancyrophorus longipennis var. *angustior* Bernhauer, 1943: 73.

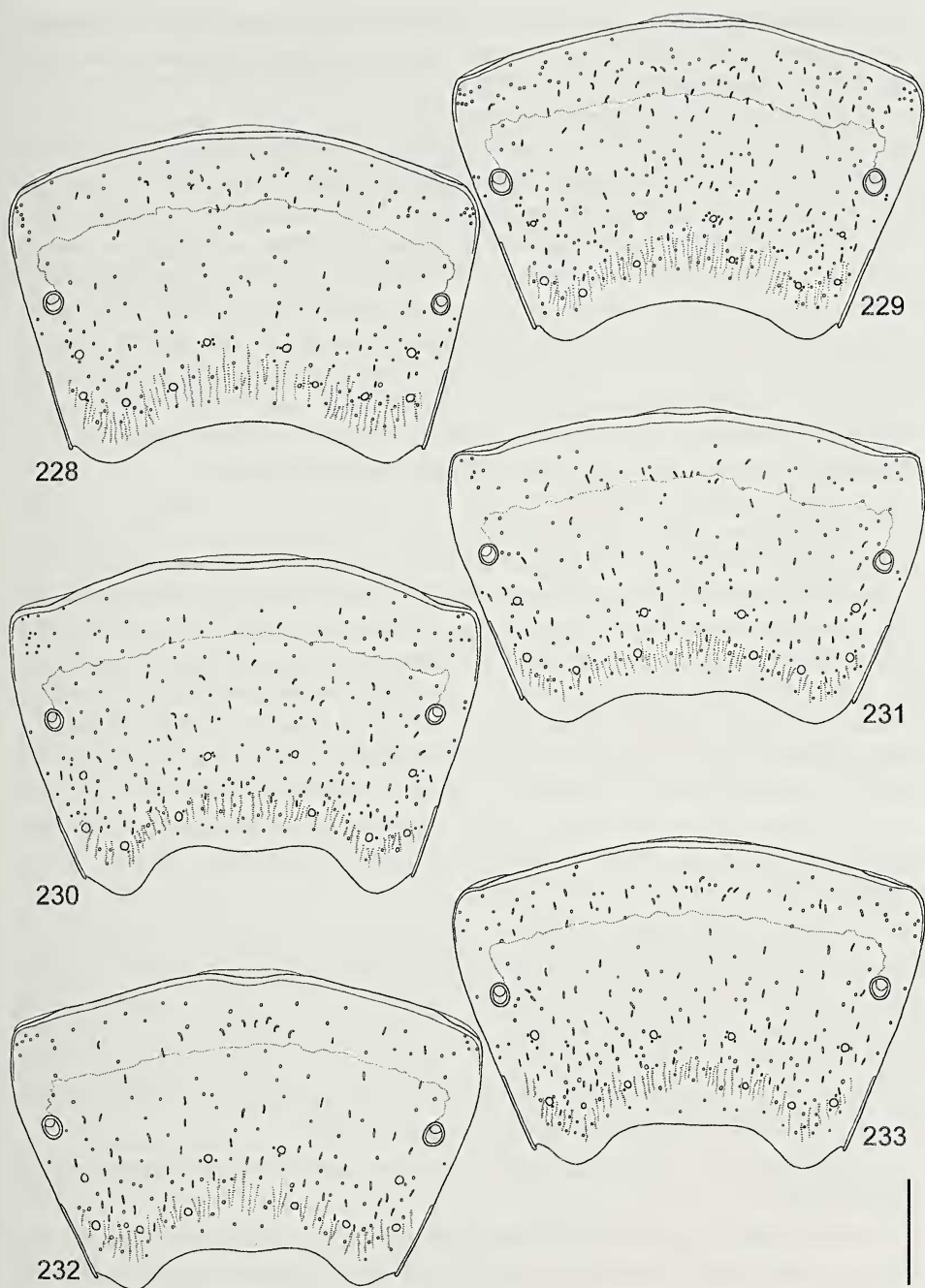
Ochtheophilus angustior (Bernhauer). – Makranczy, 2001: 179. – Lott, 2008: 18.

TYPE MATERIAL EXAMINED: LECTOTYPE: “[Slovenia], Wochein [Bohinj *+46.25/+13.98*], Carn.[ia]; leg. Kaiser VII.[19]34 \ ssp. *angustior*; Bernh.; Cotypus. \ Chicago NHMus; M. Bernhauer; Collection \ Lectotypus; *Ancyrophorus*; *longipennis*; var. *angustior* Bernh.; des. Makranczy, 2014 \ *Ochtheophilus*; *angustior* (Bernhauer); det. Makranczy, 2014” (FMNH).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Habitus as in Fig. 224. Measurements (n=10): HW = 0.51 (0.48-0.54); TW = 0.47 (0.43-0.50); PW = 0.54 (0.50-0.57); SW = 0.68 (0.62-0.73); AW = 0.72 (0.67-0.78); HL = 0.40 (0.36-0.42); EL = 0.17 (0.16-0.18); TL = 0.08 (0.07-0.09); PL = 0.43 (0.41-0.46); SL = 0.92 (0.86-1.00); SC = 0.84 (0.78-0.92); FB = 1.80 (1.67-1.93); BL = 3.14 (2.80-3.35) mm. Body blackish dark brown, elytra somewhat lighter dark brown, slightly darker around scutellum and occasionally at apex. Legs, medium to dark brown, mouthparts and antennae dark brown, latter often darker in distal half. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Antenna as in Fig. 225, mid-antennal articles as in Fig. 255. Clypeus sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge arched; separated by slightly impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, separated from clypeus/-vertex by longitudinal impressions. Vertex with two deeper impressions with two larger, setiferous punctures in them. Temples (Fig. 254) bulging, evenly curved, barely longer than half of eye length. Neck separated by a shallowly impressed transversal groove, microsculpture about the same as on head but with more transversal cells, no setation. Pronotum with a narrow marginal bead, fully visible in anterior corners.



FIGS 228-233

Tergites VIII; *Ochtheophilus columbiensis* (Hatch) (228), *O. planus* (LeConte) (229), *O. praepositus* Mulsant & Rey (230), *O. rosenhaueri* (Kiesenwetter) (231), *O. angustior* (Bernhauer) (232), *O. wunderlei* sp. n. (233). Scale bar = 0.1 mm for 232, 0.12 mm for 228, 231, 233, 0.13 mm for 229-230.

Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface with two shallow, oval impressions behind scutellum and slightly impressed anterior disc. Head with fine coriaceous/colliculate microsculpture (isodiametric cells), fading on elevated parts, stronger in impressions, on pronotum microsculpture somewhat stronger. Punctuation on head generally sparse, from fine to rather coarse and deep, much stronger at sides and in impressions, on pronotum more evenly spaced, average interspaces somewhat larger than puncture diameters; elytral punctuation more coarse and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures sometimes slightly confluent.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 232) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X apex somewhat modified, in males as in Fig. 281, in females as in Fig. 282. Aedeagus as in Fig. 239, inner sclerites as in Figs 240-241. Female ringstructures as in Figs 242-243.

COMPARATIVE NOTES: This species is rather small and therefore more easily confused with members of the *O. omalinus* group than its own close relatives. Phylogenetically the closest species is *O. wunderlei*.

NOTES: In Bernhauer's collection originally two specimens of '*Ancyrophorus longipennis* var. *angustior*' stood with the author's characteristic beige type labels "ssp. *angustior*; Bernh.; Typus/Cotypus." Shortly before the completion of the manuscript curators informed me that the "Typus" specimen (that was studied around 2000-2001) could not be found and was feared lost. Therefore the second original specimen ("Cotypus") from the type locality is designated as lectotype; should the first specimen eventually surface, it automatically becomes paralectotype.

DISTRIBUTION: Known from Western Europe to the northern Carpathians and northern Greece.

BIONOMICS: Specimens were collected from flood debris, both from clay on bank of smaller rivers and larger rivers with fine sandy banks, in riparian woodland, vegetable debris on stream- and riverbank, from wet moss (stringy moss - *Leptodictyum* sp.) also at light. It was captured by car-net through an oak forest.

***Ochtheophilus biimpressus* (Mäklin, 1852)**

Figs 10, 154-158, 205, 429, 524

Phloeonaus biimpressus Mäklin, 1852: 319.*Ancyrophorus biimpressus* (Mäklin). – LeConte, 1877: 242. – Jarrige, 1949: 61. – Hatch, 1957: 91.*Ochtheophilus biimpressus* (Mäklin). – Herman, 1970: 384. – Downie & Arnett, 1996: 441.

TYPE MATERIAL EXAMINED: *Phloeonaus biimpressus* – LECTOTYPE (here designated): “Type; H. T. [red margined round disc, curator label] \ 62 (or 69??) \ 54; 33 [Alaska, Baranof Island (Sitka Co.) *+54.09/-135.00*] \ *Phloeonaus*; *biimpressus*; Mäklin \ Lectotypus; *Phloeonaus*; *biimpressus* Mäklin; (on the back) des. Makranczy, 1999 \ *Ochtheophilus*; *biimpressus* Mäklin; det. Makranczy, 1999” (BMNH).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Habitus as in Fig. 429, forebody as in Fig. 524. Measurements (n=10): HW = 0.59 (0.56-0.62); TW = 0.55 (0.52-0.60); PW = 0.67 (0.64-0.71); SW = 0.77 (0.73-0.82); AW = 0.90 (0.83-1.04); HL = 0.45 (0.41-0.48); EL = 0.17 (0.16-0.18); TL = 0.12 (0.11-0.13); PL = 0.53 (0.50-0.57); SL = 0.88 (0.84-0.94); SC = 0.80 (0.75-0.85); FB = 1.93 (1.84-2.08); BL = 3.55 (3.23-4.02) mm. Head black, abdomen dark brown with reddish tint. Pronotum dark brown turning to reddish medium brown around the edges, sometimes whole dorsal surface lighter, slightly orangeish at spots. Elytra reddish medium to dark brown, occasionally lighter from shoulders along outer margin to hind edge (leaving centre of disc and scutellar area somewhat darker. Legs reddish medium to dark brown, basal antennomeres often lighter, medium brown. Body rather shiny due to sparse elytral setation and large, smooth puncture interspaces. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 429. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, significantly longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on

pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 205) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 154, inner sclerites as in Figs 155-156. Female ringstructures as in Figs 157-158.

COMPARATIVE NOTES: This taxon cannot be confused with any other, by its unique reddish coloration, rather large size and extremely transverse middle antennomeres. As a rather shiny species it is somewhat similar to *O. flexuosus*, but the lateral pronotal margins are much less sinuate.

DISTRIBUTION: Known from mostly from the Pacific Coast Ranges in North America, but not only, it is also found in the Rocky Mountains on the more northern/higher locations. Bound to forested areas.

BIONOMICS: Collected most frequently from wet mosses on rockface at edge of stream, along waterfalls but also on forest floor, around logs. Also found by sifting leaf litter (mostly deciduous trees like alder, cedar, maple, oak, but exceptionally also conifers). Sometimes encountered in dung and rotting mushrooms. Labels indicate wet, shaded, cold environments, even the edge of snowmelt.

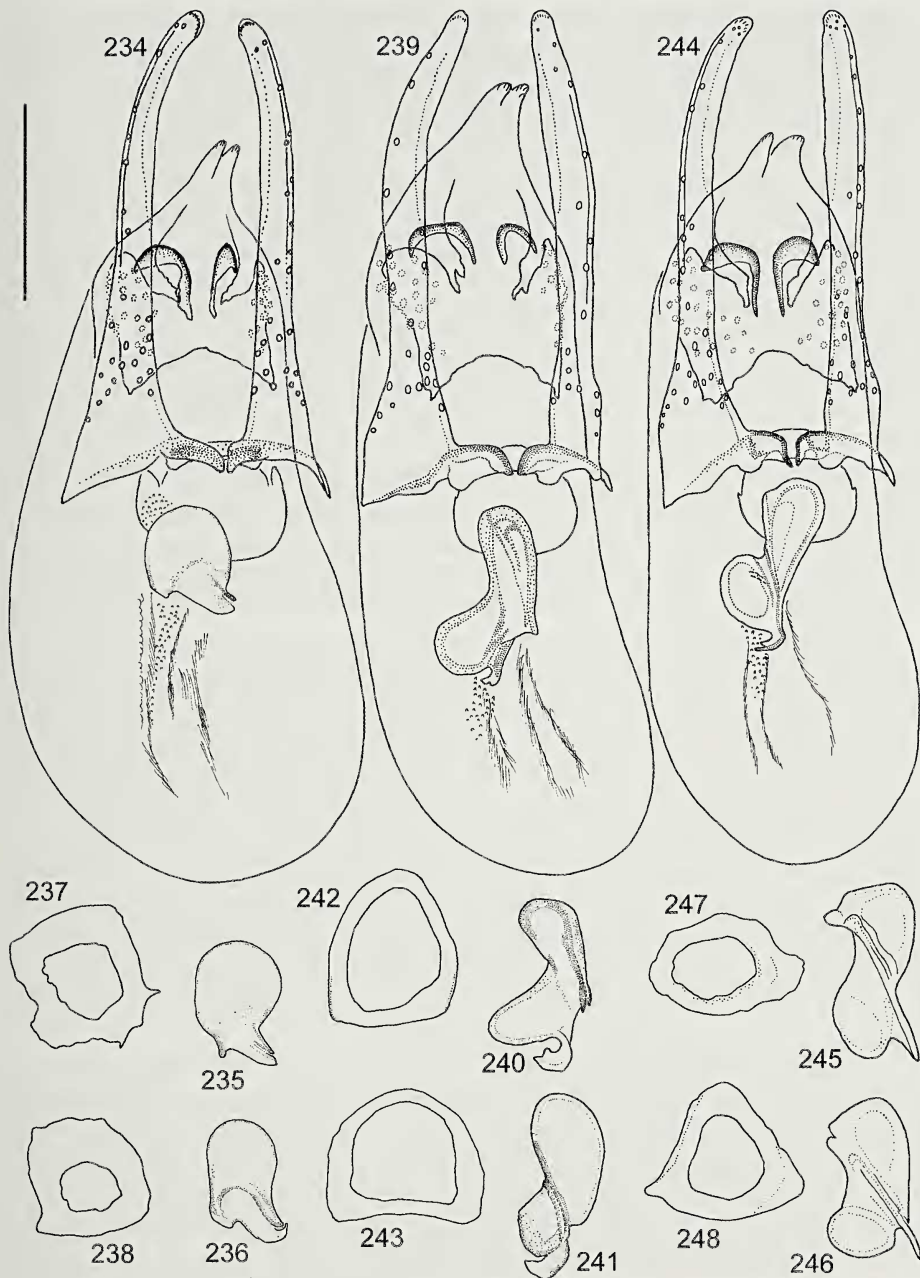
Ochtheophilus brachypterus (Jeannel & Jarrige, 1949) Figs 11, 189-193, 203, 532, 563

Ancyrophorus brachypterus Jeannel & Jarrige, 1949: 327.

Ochtheophilus brachypterus (Jeannel & Jarrige). – Herman, 1970: 384. – Makranczy, 2001: 179.

TYPE MATERIAL EXAMINED: *Ancyrophorus brachypterus* – HOLOTYPE: “[red square] \ p. [Peštera] Gârla vachi; 1322 [11.]VI.28 [Runcu, jud. Gorj] \ Type \ brevipennis; nsp. \ brachypterus; Jeann. Jarr. \ Holotypus; Ancyrophorus; brachypterus Jeann. & Jarr. \ Ochtheophilus; brachypterus Jeann. & Jarr.; det. Makranczy, 1999” (MNHP).

OTHER MATERIAL: **AUSTRIA:** Kärnten, Trögern, Potokgrab. *+46.44/+14.49*, 26.VI-4.VII.1987, leg. Siede & Wunderle, coll. Wunderle (1 ♀), HNHM (1). – Kärnten, Zell-Pfarre *+46.47/+14.39*, 15.VII.1965, coll. Assing (1 ♂). – Tirol, Lienzer Dolomiten, Kerschbaumer Alm *+46.76/+12.77*, 13-19.VII.1949, leg. F. Schubert, NHMW (1). — **SLOVAKIA:** Vysoké Tatry, Vyšná Závrat' v Garajovej doline, 1350m *+49.19/+19.99*, 03.VII.1996, leg. T. Jászay, pot. v machu pot., SMBC (1). – Vysoké Tatry, Kôprová dolina, Vyšná Závrat', 1400m *+49.19/+20.00*, 15.VII.1999, leg. Gy. Makranczy, HNHM (1 ♂, 1 ♀). – Vysoké Tatry, Kôprová dolina, Vyšná Závrat', 1450m *+49.19/+20.00*, 16.VII.1999, leg. Gy. Makranczy, HNHM (1f). – Vysoké Tatry, Kôprová dolina, Kôprovský potok, v machových nárastoch na vode, 1200-1300m *+49.19/+19.99*, 16.VII.1999, leg. T. Jászay, SMBC (1 ♂). – Vysoké Tatry, Kôprová dolina, Kôprovský potok near Kmet'ov vodopád, 1200m *+49.18/+19.99*, 16.VII.1999, leg. Gy. Makranczy, from wet moss, HNHM (2 ♀). – Ždiar, Monkova dolina, 1500m *+49.26/+20.23*, 31.VII.2009, leg. M. Mantič, Pinus mugo, moss on stones in brook, coll. Mantič (2). – Tatranská Javorina - Zadné Medodoly, Med'odolský potok, 1400m *+49.23/+20.19*, 13.IX.2009, leg. M. Mantič, moss on stones in brook, coll. Mantič (3). — **ROMANIA:** jud. Hunedoara, P.N. Retezat,



FIGS 234-248

(234-238) *Ochtheophilus columbiensis* (Hatch); aedeagus (234), inner sclerites (235-236), female ringstructures (237-238). (239-243) *O. angustior* (Bernhauer); aedeagus (239), inner sclerites (240-241), female ringstructures (242-243). (244-248) *O. wunderlei* sp. n.; aedeagus (244), inner sclerites (245-246), female ringstructures (247-248). Scale bar = 0.04 mm for 237-238, 0.05 mm for 247-248, 0.06 mm for 242-243, 0.085 mm for 239-241, 0.1 mm for 244-246, 0.13 mm for 234-236.

Gura Bucurei, stream Peleaga, 45°20'N, 22°54'E, 1600m, 30.V.2002, Gy. Makranczy, from streambank sand and fine gravel, flotation, HNHM (2). – jud. Covasna, 5km NNE Comandău, stream Bâsca Mare, shady confluence with smaller stream, 45°48'49"N, 26°18'40"E, 1160m, 18.V.2003, Gy. Makranczy (18), flotation from wet but not overflowed mosses, HNHM (1). – jud. Bistrița-Năsăud, Munții Rodnei, stream Bistrița Aurie, nr. L. Izv. Bistriței, 5km SW Pasul Prislop, 47°34'40"N, 24°48'51"E, 1650m, 13.VI.2003, Gy. Makranczy (47), from cattle dung on pasture and mosses in crossing stream, HNHM (7). – jud. Argeș, Munții Făgăraș, rocky slope at bridge on stream Capra, 2km SSE Lac Bilea, 45°35'03"N, 24°38'23"E, 1630m, 15.VI.2003, leg. Gy. Makranczy (57), from overflowed and wet moss on rocks, flotation, HNHM (3). – jud. Dâmbovița, Munții Bucegi, forested part of Ialomița in Cheile Ursilor, under Piciorul Babelor, 45°23'59"N, 25°26'34"E, 1620m, 18.VII.2004, leg. Gy. Makranczy (137), from moss, debris and gravel at small cascades, flotation, HNHM (2). – jud. Dâmbovița, Munții Bucegi, stream Ialomița under Padina, 0.8 km S Schitul Peștera, 45°23'19"N, 25°26'05"E, 1490m, 18.VII.2004, leg. Gy. Makranczy (139), from moss and plant debris on shaded bank, flotation, HNHM (4), MGAB (2). – jud. Hunedoara, Munții Retezat, Gura Bucurei, under bridge on p. Peleaga at p. Bucura confluence, 45°20'19"N, 22°53'37"E, 1600m, 3.VI.2008, leg. Gy. Makranczy (372), fast stream, fine gravel spot between rocks, flotation, HNHM (2). – jud. Hunedoara, Munții Retezat, Gura Bucurei, canyon of p. Peleaga 0.2km E p. Bucura confluence, 45°20'18"N, 22°53'44"E, 1600m, 3.VI.2008, leg. Gy. Makranczy (374), from mosses on big rocks in fast stream, flotation, HNHM (10), MGAB (3). – jud. Bistrița-Năsăud, Munții Rodnei, p. Bistrița Aurie, 0.5km downstream of L. Izvoru Bistriței, 47°34'40"N, 24°49'00"E, 1600m, 23.VI.2008, leg. Gy. Makranczy (381), cascaded part, mosses, plant debris in stream, floated, HNHM (2). – Siebenbürgen, Kerzergebirge [Munții Făgăraș] *+45.63/+24.61*, leg. Deubel, coll. Bernhauer, FMNH (1 ♀).

REDESCRIPTION: Forebody as in Fig. 532. Measurements (n=10): HW = 0.64 (0.60-0.68); TW = 0.60 (0.56-0.62); PW = 0.76 (0.72-0.81); SW = 0.89 (0.82-0.94); AW = 1.01 (0.92-1.10); HL = 0.49 (0.46-0.53); EL = 0.17 (0.15-0.19); TL = 0.125 (0.11-0.14); PL = 0.61 (0.56-0.65); SL = 1.07 (0.96-1.18); SC = 0.97 (0.86-1.06); FB = 2.25 (2.12-2.42); BL = 4.03 (3.66-4.50) mm. Head almost black, pronotum and abdomen blackish dark brown with occasional reddish tint. Elytra slightly reddish dark brown, as well as mouthparts, legs and antennae. Body appearing rather dull, especially head and pronotum with fine but very strong microsculpture. Pubescence extremely fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with fine and much longer setae on apices. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with 2-3 conspicuously longer setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 563. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples slightly bulging, evenly curved, significantly longer than half of eye length. Neck shiny, separated only by a weakly impressed transversal groove, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two

smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 203) basal edge evenly arched, but straight at a short distance in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 189, inner sclerites as in Figs 190-191. Female ringstructures as in Figs 192-193.

COMPARATIVE NOTES: This species by its surface sculpture is similar to *O. tatricus*, but in the latter the elytra are much more elongate and less broad. Another similar species is *O. legrosi*, in fact the two are barely distinguishable externally (*O. legrosi* slightly larger), but their distributions (according to our current knowledge) do not overlap, as *O. legrosi* only occurs in the highest ranges of the Pyrenées.

DISTRIBUTION: The species is so far known from the Carpathians and the Southern Alps. An exemplar from Derek A. Lott's collection (BMNH) from France, Hautes Alpes, La Grave, Torrent du Gan, 1760 m, 15.VIII.1999 had an aedeagus that undoubtedly belongs to *O. brachypterus* glued to the card with a dissected specimen of *O. praepositus* – if we assume that the erroneously glued aedeagus was from the same or a nearby locality as the dissected specimen, this is the westernmost record of the species.

BIONOMICS: Lives in wet moss on rocks at (or in) streams and waterfalls, together with *O. praepositus*. Reported from caves, but can also be found in more open habitats; however, this species is bound to higher elevations and usually starts appearing in moss taken at around 1500 m, where it is still comparatively rarer than *O. praepositus*, but at higher elevations (in the *Pinus mugo* belt) the balance gradually shifts towards *O. brachypterus*, and near 2000 m the latter can even be dominant in samples. Very occasionally specimens were found at lower elevations (1000-1200 m), in deep valleys, at cold, fast streams.

Ochtheophilus columbiensis (Hatch, 1957)

Figs 228, 234-238, 531, 566

Ancyrophorus columbiensis Hatch, 1957: 91.

Ochtheophilus columbiensis (Hatch). – Herman, 1970: 384.

TYPE MATERIAL EXAMINED: *Ancyrophorus columbiensis* – HOLOTYPE: "Canada, British Columbia, Copper Mtn. [*+49.33/-120.54*], 11.X.1930, leg. G. Stace Smith" (coll. G. Stace

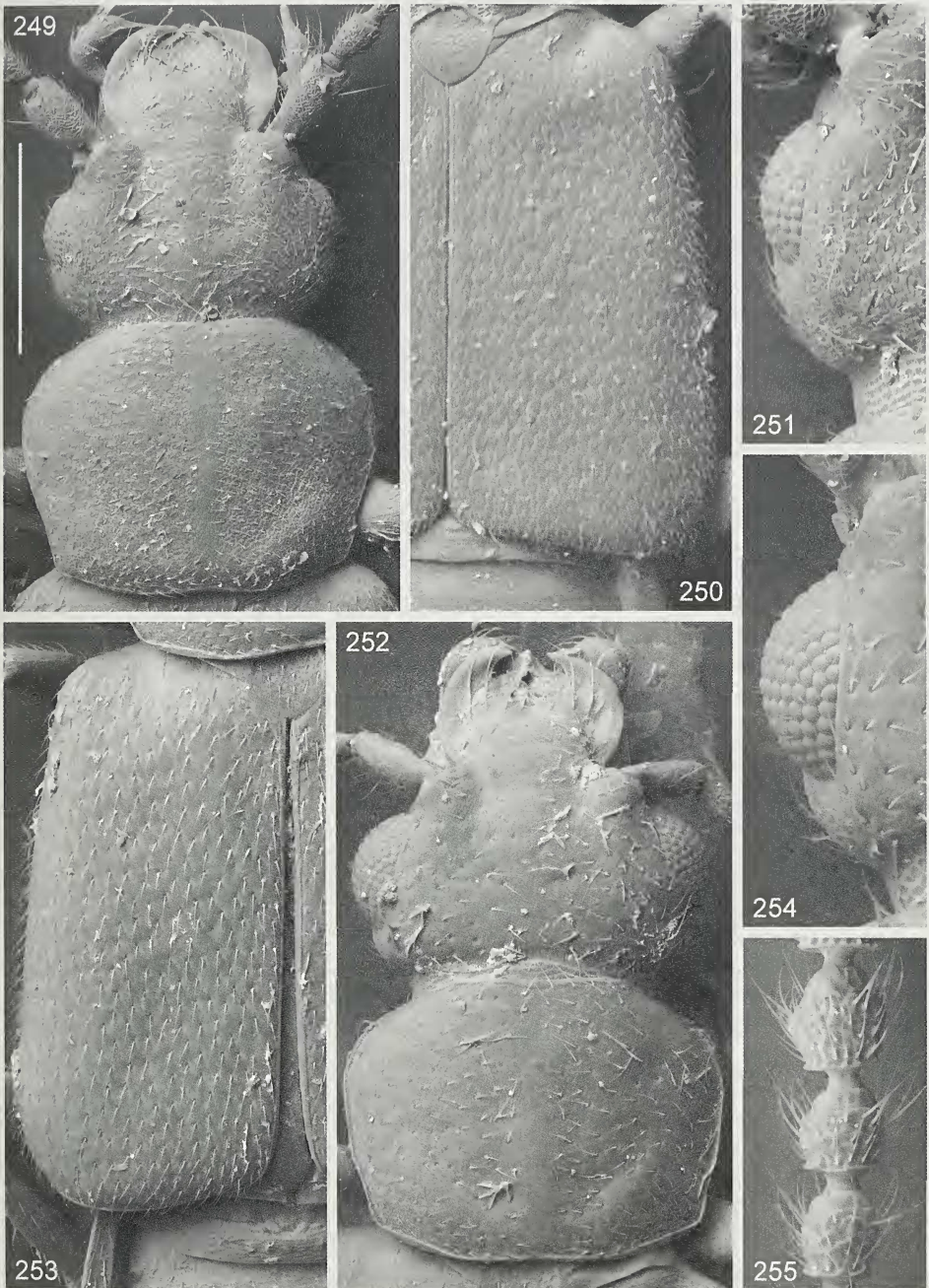
Smith, SMDV). — PARATYPES (3): same data as holotype (coll. G. Stace Smith, SMDV, 1). "Canada, British Columbia, Bakerville, 4200ft. [$+53.07/-121.52^*$], 12.VIII.1950, leg. G. Stace Smith, ex fungus" (coll. G. Stace Smith, SMDV, 1), "USA, Idaho, Twin Creek For. Ca, Challis Nat. For. 5000ft [$+45.61/-113.97^*$], 25.VII.1952., leg. B. Malkin" (FMNH, 1).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 531. Measurements ($n=10$): HW = 0.55 (0.53-0.59); TW = 0.52 (0.51-0.56); PW = 0.66 (0.62-0.69); SW = 0.76 (0.72-0.80); AW = 0.89 (0.82-0.97); HL = 0.42 (0.41-0.46); EL = 0.16 (0.14-0.17); TL = 0.10 (0.09-0.11); PL = 0.52 (0.50-0.54); SL = 0.84 (0.78-0.89); SC = 0.76 (0.70-0.80); FB = 1.85 (1.74-1.92); BL = 3.43 (3.04-3.96) mm. Head, pronotum and abdomen dark brown, with very slight reddish tone. Elytra reddish medium to dark brown, darker around scutellum and shoulders, sometimes also at apex. Pronotum in some specimens appear lighter, slightly reddish. Mouthparts and antennae reddish dark brown, legs reddish medium brown, tibiae (especially both ends) and tarsi lighter. Body with greasy lustre mostly due to elytral setation plus forebody punctuation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to latero-sternites. Head antier eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 566. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples slightly bulging, evenly curved, significantly longer than half of eye length. Neck separated by a shallowly impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures somewhat confluent on whole elytra.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in



FIGS 249-255

(249-251) *Ochtheophilus legrosi* (Jarrige); head and pronotum (249), elytron (250), side of head (251). (252-87) *O. incognitus* sp. n.; head and pronotum (252), elytron (253). (254-255) *O. angustior* (Bernhauer); side of head (254), antennomeres 5-7 (255). All SEM, dorsal views. Scale bar = 0.17 mm for 254-255, 0.25 mm for 251, 0.30 mm for 252-253, 0.50 mm for 249-250.

middle (nearly uniform breadth). Tergite VIII (Fig. 228) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 234, inner sclerites as in Figs 235-236. Female ringstructures as in Figs 237-238.

COMPARATIVE NOTES: The characteristic specimens of *O. columbiensis* are easily separable from the congeners occurring in the same area (*O. planus*, the smaller *O. forticornis* and the larger *O. hammondi*) by the shorter (and often flat, medially depressed) elytra. The uncharacteristic specimens could be somewhat difficult to separate from *O. planus*, but the latter has shorter, less developed temples, microsculpture fading around frontoclypeal suture. *Ochtheophilus hammondi* (the two distribution ranges barely overlap) is separable by its medially modified palisade fringe on apex of tergite VII.

DISTRIBUTION: Found in the Pacific Coast Ranges and the Rocky Mountains except the southernmost states (California, Arizona, New Mexico).

BIONOMICS: Specimens were found most frequently at stream banks, in muddy gravel, in wet moss at stream edge and along waterfalls, in river debris and under rocks along water. Collected also from willow litter near stream and springs and occasionally also from dung.

Ochtheophilus flexuosus Mulsant & Rey, 1856 Figs 1-5, 23, 140-144, 206, 525, 569
Ochtheophilus flexuosus Mulsant & Rey, 1856a: 2 [=1856b: 2]. – Mulsant & Rey, 1878: 797. – Herman, 1970: 384. – Makranczy, 2001: 178.

Trogophloeus flexuosus Fairmaire & Laboulbène, 1856: 614.

Ancyrophorus flexuosus (Mulsant & Rey). – Kraatz, 1857: 887. – Fauvel, 1871: 170 [=1872: 144]. – Ganglbauer, 1895: 670. – Jarrige, 1949: 59. – Scheerpeltz, 1950: 65.

TYPE MATERIAL EXAMINED: *Ochtheophilus flexuosus* – LECTOTYPE (here designated): “[small, circular, “nankin” coloured label] \ Beaujolais \ Lectotypus; *Ochtheophilus flexuosus* Mulsant & Rey.; (on the back) des. Makranczy, 1999 \ *Ochtheophilus flexuosus* Mulsant & Rey; det. Makranczy, 1999” (coll. Rey, MHNL). – PARALECTOTYPES (3): same data as lectotype (coll. Rey, MHNL, 3).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 525. Measurements (n=10): HW = 0.63 (0.60-0.67); TW = 0.57 (0.53-0.61); PW = 0.77 (0.70-0.83); SW = 0.85 (0.77-0.91); AW = 0.98 (0.89-1.10); HL = 0.44 (0.41-0.48); EL = 0.19 (0.17-0.20); TL = 0.09 (0.07-0.10); PL = 0.59 (0.54-0.65); SL = 0.98 (0.91-1.05); SC = 0.89 (0.82-0.96); FB = 2.08 (1.90-2.29); BL = 3.76 (3.21-4.11) mm. Head and abdomen blackish dark brown, laterosclerites often lighter at their bases. Pronotum reddish medium to dark brown, elytra the same but usually a little bit brighter. Legs and mouthparts reddish medium brown, antennae reddish dark brown with basal antennomeres lighter. Body mostly lustrous mostly due to abundant and smooth interspaces between punctures and sparse body setation. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially

adjacent to laterosternites. Head antieriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 569. Clypeus with very scattered, small punctures (and coriaceous microsculpture with transverse cells), trapezoid, corners rounded, anterior edge gently arched; separated by sharp border between microsculptured clypeus and shiny vertex. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with two small impressions in middle. Temples bulging, evenly curved, little longer than half of eye length. Neck separated by a strongly microsculptured transversal groove, microsculpture present but shallow, so still almost as shiny as vertex, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very strongly concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytra with two shallow, oval impressions behind scutellum and anterior half of disc gently impressed. On head and pronotum fine coriaceous microsculpture apparent only in impressed areas, almost absent on elevated parts. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures slightly confluent.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 206) basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 140, inner sclerites as in Figs 141-142. Female ringstructures as in Figs 143-144.

COMPARATIVE NOTES: This species stands out by its sinuate lateral pronotal edges plus well formed anterior pronotal corners, and is quite impossible to confuse with any other species. By its colouration and surface sculpture somewhat similar to *O. biimpressus*, although both are quite distinct and perhaps not even closely related.

DISTRIBUTION: Known from Western Europe, including Portugal and Spain but excluding the British Isles.

BIONOMICS: Specimens were collected from debris on a streambank, the sandy bank of a small stream, the bank of a small river in the forest, and also captured by flight intercept trap (FIT).

***Ochtheophilus legrosi* (Jarrige, 1949)**

Figs 179-183, 204, 226, 249-251, 534

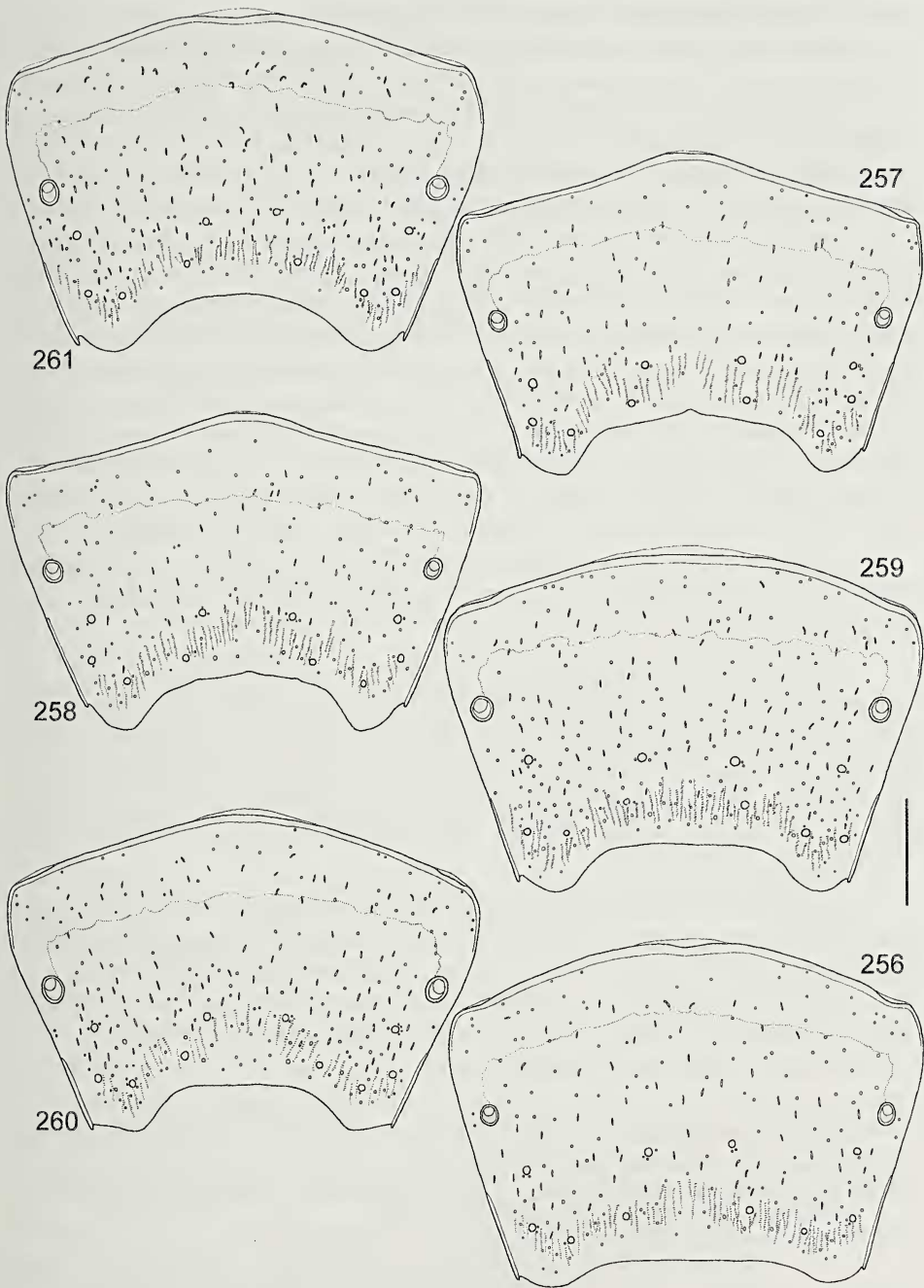
Ancyrophorus legrosi Jarrige, 1949: 59, 60. – Fagel, 1951a: 8.*Ochtheophilus legrosi* (Jarrige). – Herman, 1970: 384.

TYPE MATERIAL EXAMINED: *Ancyrophorus legrosi* – HOLOTYPE: “[FRANCE,] Hautes-Pyrénées, [cirque de] Gavarnie; 1600m *+42.70/-00.01*, VII.1946. leg. Cl. Legros” (MNHP).

OTHER MATERIAL: **FRANCE:** Hautes-Pyrénées, [Val d']Estaragne, 2200m *+42.82/+00.15*, VII.1963, coll. Jarrige, MNHP (1). – 3289 [leg. L. Pandellé, ?Gavarnie *+42.73/-00.02*, 28.VI.1871, détrit du Gave], Hautes-Pyrénées *+42.82/+00.15*, coll. Fauvel, ISNB (1). – Pyrénées-Orientales, Canigou, Ravin de Balagt *+42.55/+02.46*, VII.1961, leg. J. Jarrige, mousses de ruisseau, coll. Jarrige, MNHP (1). – Pyrénées-Orientales, Canigou, Ravin de Balagt *+42.57/+02.45*, 9.VII.1967, leg. Cantot, coll. Dauphin (1). – Pyrénées-Orientales, Casteil (Canigou), Ravin du Pla d'en Costes, 1960-2020m *+42.48/+02.42*, 15.VII.2003, leg. M. Tronquet, mousses asper, coll. Tronquet (2♀). – dept. Pyrénées-Orientales, Mt. Canigou *+42.48/+02.42*, 2.VII.1976, leg. Lohse?, coll. Lohse, MHNG (1♂, 1♀). – Ravin du Pla d'en Costes, 1960-2020m *+42.48/+02.42*, 15.VII.2003, leg. M. Tronquet, mousses asper, coll. Tronquet (2♀). – ruisseau de Balagt, 1800m, VI-1958, leg. Levasseur, coll. Levasseur, MNHP (1). – Mariailles *+42.52/+02.41*, 1500m, VI.1958, leg. Levasseur coll. Levasseur, MNHP (1). – Pyren. occid., El Portelet, 1400m *+42.83/-00.39*, 12.VI.1991, leg. P. Wunderle, spritzmoos, coll. Wunderle (1♂). – Pyren. occid., Laruns, Eaux Bonnes *+42.97/-00.44*, 14.VI.1991, leg. P. Wunderle, bachmoos/laub, coll. Wunderle (1♀), NHMW (1♂).

REDESCRIPTION: Forebody as in Fig. 534. Measurements (n=10): HW = 0.63 (0.60-0.67); TW = 0.60 (0.65-0.58); PW = 0.74 (0.72-0.80); SW = 0.84 (0.80-0.90); AW = 0.97 (0.94-1.06); HL = 0.51 (0.47-0.54); EL = 0.16 (0.14-0.18); TL = 0.15 (0.13-0.17); PL = 0.61 (0.58-0.66); SL = 1.01 (0.95-1.06); SC = 0.92 (0.88-0.97); FB = 2.25 (2.09-2.36); BL = 4.28 (3.79-4.60) mm. Head almost black, pronotum and abdomen blackish dark brown with occasional reddish tint. Elytra slightly reddish dark brown, as well as mouthparts, legs and antennae. Body appearing rather dull, especially head and pronotum with fine but very strong microsculpture. Pubescence extremely fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with fine and much longer setae on apices. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with one or two longer setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 226. Clypeus (Fig. 249) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 251) slightly bulging, evenly curved, significantly longer than half of eye length. Neck shiny, separated only by a weakly impressed transversal groove, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 250) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less



FIGS 256-261

Tergites VIII; *Ochtheophilus venustulus* (Rosenhauer) (256), *O. omalinus* (Erichson) (257), *O. szeli* sp. n. (258), *O. gusarovi* sp. n. (259), *O. qingyianus* sp. n. (260), *O. kirschenblatti* sp. n. (261). Scale bar = 0.1 mm for 256, 0.11 mm for 257-260, 0.12 mm for 261.

straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 204) basal edge evenly arched, but straight at a short distance in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 179, inner sclerites as in Figs 180-181. Female ringstructures as in Figs 182-183.

COMPARATIVE NOTES: This species is extremely similar to *O. brachypterus*, can be distinguished by the inner sclerite of the aedeagus being more boomerang, rather than lollipop shaped.

DISTRIBUTION: The species is so far known from the whole chain of the Pyrenees, interestingly, all records are from the French side, although undoubtedly this species also inhabits the nearby areas of Spain and Andorra. Further specimens that I have not examined in the Coiffait collection (MNHP), data from Marc Tronquet: Les Eaux-Chaudes, Pyrénées-Atlantiques, 22.V.1960, leg. Magné & Lichau (1), Sentein, grotte de la Cigalère, Ariège, XI.1953, leg. Coiffait (1), (aven de) Salau, Ariège, 30.X.1953, leg. Coiffait (1).

BIONOMICS: The labels of the examined specimens do not give away a lot of bionomical information, but in 2003 Marc Tronquet visited Mt. Canigou on my special request/suggestion and he has examined moss of six spots between 1685 and 2060 m of elevation; two specimens were found at the same spot between 1960 and 2020 m. This is undoubtedly a high elevation species, habits perhaps similar to those of *O. brachypterus*, a very closely related species.

***Ochthephilus lenkoranus* (Scheerpeltz, 1950)** Figs 164-168, 177-178, 526, 570

Ancyrophorus lenkoranus Scheerpeltz, 1950: 57, 68.

Ochthephilus lenkoranus (Scheerpeltz). – Herman, 1970: 384. – Gildenkov, 2000a: 1187. – Gildenkov, 2000b: 849. – Makranczy, 2001: 180.

Ancyrophorus swaneticus Yablokov-Khnzorian, 1974: 60, **syn. nov.**

TYPE MATERIAL EXAMINED: *Ancyrophorus lenkoranus* – LECTOTYPE (♂, here designated): “Lenkoran \ omalin. \ coll. Schuster \ Typus; Ancyrophorus; lenkoranus; [O]. Scheerpeltz \ Lectotypus; Ancyrophorus; lenkoranus Scheerpeltz; [on the back] des. Makranczy, 1999 / Ochthephilus; lenkoranus Scheerpeltz; det. Makranczy, 1999” (NHMW). – PARALECTOTYPE (1): “Lenkoran; Leder; (Reitter) \ coll. Schuster \ Typus; Ancyrophorus; lenkoranus; O. Scheerpeltz \ Paralectotypus; Ancyrophorus; lenkoranus Scheerpeltz; [on the back] des. Makranczy, 1999 \ Ochthephilus; lenkoranus Scheerpeltz; det. Makranczy, 1999” (NHMW, 1).

Ancyrophorus swaneticus – PARATYPE (1): “Сванетия, Местиурия, Местия, 1700 м, 29.VI.1968.” (BMNH, 1).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 526. Measurements (n=10): HW = 0.56 (0.51-0.58); TW = 0.51 (0.47-0.54); PW = 0.62 (0.56-0.65); SW = 0.77 (0.69-0.79); AW = 0.85 (0.73-0.94); HL = 0.42 (0.38-0.45); EL = 0.19 (0.17-0.20); TL = 0.09 (0.08-0.10); PL = 0.50 (0.44-0.54); SL = 1.03 (0.90-1.08); SC = 0.95 (0.82-1.00); FB = 2.03 (1.80-2.13); BL = 3.62 (3.15-4.03) mm. Head and abdomen dark brown, often blackish, pronotum dark brown, just perceptibly lighter than previous two. Elytra medium to dark brown, if lighter (reddish) scutellar area to shoulders and a transverse stripe at apex darker, even blackish. Legs, mouthparts and antennae medium to dark brown, in most cases rather unicolorous. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with at least one conspicuously longer seta near sutural corner. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 570. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, barely longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII basal edge in females (Fig. 178) more strongly angular, slightly more evenly arched in males (Fig. 177); apical edge with

sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 164, inner sclerites as in Figs 165-166. Female ringstructures as in Figs 167-168.

COMPARATIVE NOTES: This species is difficult to identify without dissection. Several species tend to be very similar, most importantly the *O. praepositus* – *O. rosenhaueri* sibling pair. In this species the antennae are elongate (article 6 always much longer than broad, roughly 1,6-1,8x) and pronotal ridges tend to be very shiny with weakened microsculpture; in the other species if the antennae are elongate, the pronotum is microsculptured everywhere, even on the shinier ridges. Phylogenetically the most closely related taxon seems to be *O. solodovnikovi*, the two, however, greatly differ in size.

DISTRIBUTION: Known from the southern Alps and northern Carpathians through the whole Balkans and Turkey to Crimea and Transcaucasia.

BIONOMICS: Specimens were collected from finer sand on a riverbank, muddy spot on a riverbank, debris on a riverbank, wet moss at a waterfall and wet leaf litter (under *Petasites hybridus*), and were also captured by car-net.

***Ochtheophilus planus* (LeConte, 1861)**

Figs 217-221, 229, 529, 573

Ancyrophorus planus LeConte, 1861: 69. – LeConte, 1877: 241. – Hatch, 1957: 400.

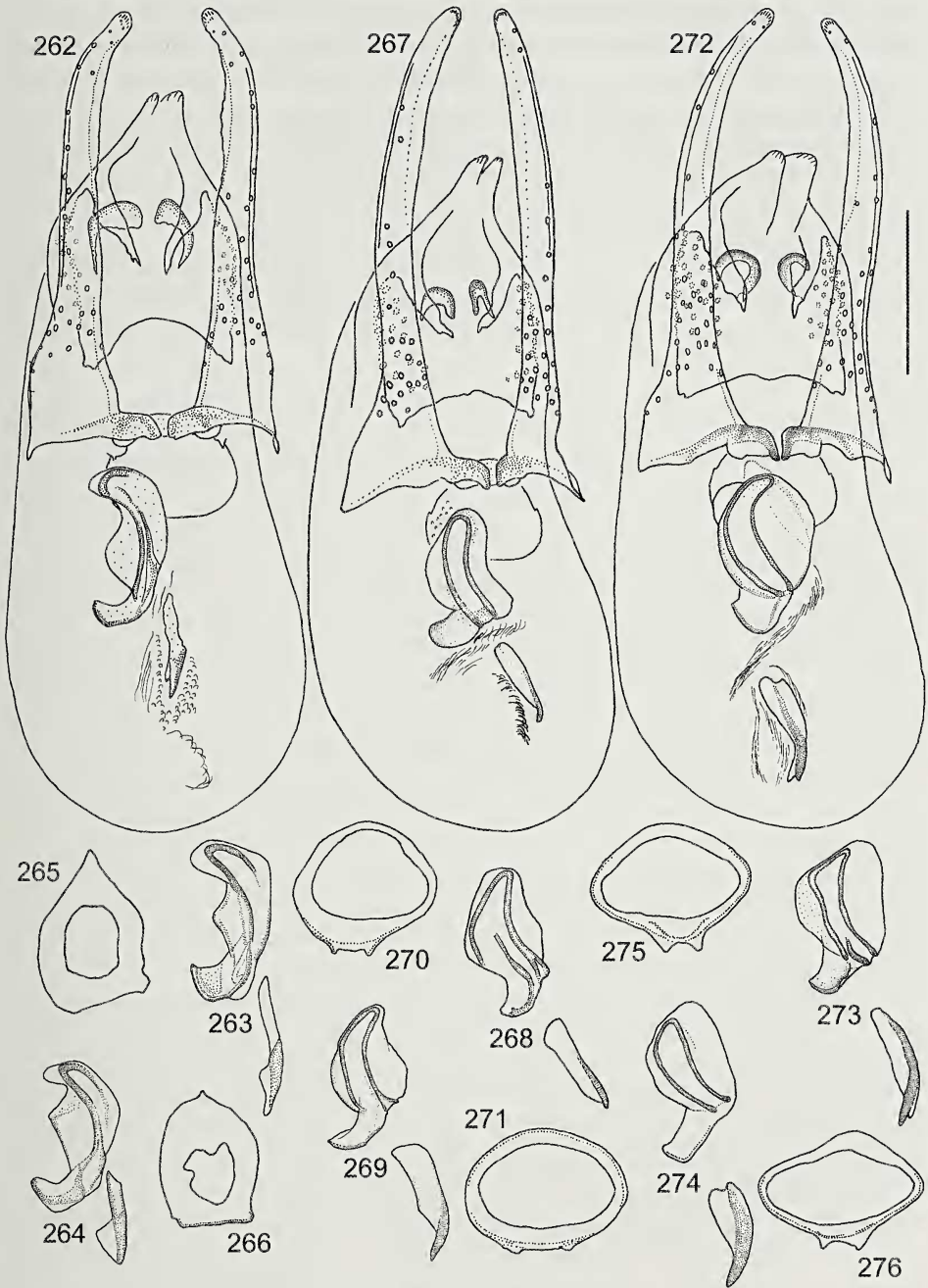
Ochtheophilus planus (LeConte). – Herman, 1970: 384. – Downie & Arnett, 1996: 441.

Ancyrophorus curtippennis Eppelsheim, 1893: 65, syn. nov. – Scheerpeltz, 1950: 59.

TYPE MATERIAL EXAMINED: *Ancyrophorus planus* – LECTOTYPE (here designated): “[pale blue disc] \ Type 6562 \ Ancyrophorus; planus Lec. \ locality probably; Lake Superior [+47.00/-89.00*] \ Lectotypus; Ancyrophorus; planus LeConte; [on the back] des. Makranczy, 1999 \ Ochtheophilus; planus LeConte; det. Makranczy, 1999” (MCZN). – PARALECTOTYPES (2): same data as lectotype (coll. Kraatz, SDEI, 1, coll. Fauvel, ISNB, 1). *Ancyrophorus curtippennis* – LECTOTYPE (here designated): “Baikal [‘Quellgebiet des Irkut’, in der Nähe von Irkutsk, von Tunka bis Munku-Sardik im Sajan’schen Gebirge +51.75/+101.00*] \ Type; Ancyrophorus; curtippennis; Baikal n. sp. \ coll. Reitter \ Holotypus 1893; Ancyrophorus; curtippennis; Eppelsheim \ Ancyrophorus; curtippennis Epp.; det. Székessy \ Lectotypus; Ancyrophorus; curtippennis Eppelsheim; [on the back] des. Makranczy, 1999 \ Ochtheophilus; planus LeConte; det. Makranczy, 1999” (HNHM). – PARALECTOTYPES (6): same data as lectotype, (HNHM, 2). “Ost-Sibirien; Quellgebiet; des Irkut; Leder 1891 \ curtippennis; Epp. \ c. Eppelsh.; Steind. d. \ Typus \ Paralectotypus; Ancyrophorus; curtippennis Eppelsheim; (on the back) des. Makranczy, 1999 \ Ochtheophilus; planus LeConte; det. Makranczy, 1999” (NHMW, 3), “Ost-Sibirien; Quellgebiet; des Irkut; Leder 1891 \ curtippennis; Epp. \ Dr. M. Bernhauer; donavit; 16. XII. 1933 \ ex coll.; Scheerpeltz \ Paralectotypus; Ancyrophorus; curtippennis Eppelsheim; [on the back] des. Makranczy, 1999 \ Ochtheophilus; planus LeConte; det. Makranczy, 1999” (NHMW, 1).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 529. Measurements (n=10): HW = 0.60 (0.57-0.63); TW = 0.55 (0.53-0.58); PW = 0.72 (0.68-0.77); SW = 0.88 (0.80-0.94); AW = 1.03 (0.93-1.12); HL = 0.46 (0.43-0.48); EL = 0.19 (0.18-0.20); TL = 0.09 (0.08-0.10); PL = 0.56 (0.53-0.60); SL = 1.05 (0.92-1.13); SC = 0.95 (0.82-1.04); FB = 2.13 (1.95-2.21); BL = 3.80 (3.43-4.06) mm. Head, pronotum and abdomen blackish dark brown, elytra dark brown, sometimes almost black, but often with slight reddish tint.



FIGS 262-276

(262-266) *Ochtheophilus kirschenblatti* sp. n.; aedeagus (262), inner sclerites (263-264), female ringstructures (265-266). (267-271) *O. omalinus* (Erichson); aedeagus (267), inner sclerites (268-269), female ringstructures (270-271). (272-276) *O. szeli* sp. n.; aedeagus (272), inner sclerites (273-274), female ringstructures (275-276). Scale bar = 0.045 mm for 265-266, 0.055 mm for 270-271, 275-276, 0.08 mm for 262-264, 0.1 mm for 267-269, 272-274.

Antennae, mouthparts and legs dark brown, except tarsi and both ends of tibiae lighter, medium brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriorly eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with occasional, thin (so inconspicuous) but longer setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 573. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supra-antennal prominences well developed, separated from clypeus/vertex by longitudinal impressions. Vertex with two feeble impressions in middle. Temples slightly bulging, evenly curved, barely longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with slightly transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface with two shallow, oblique impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces 2x larger than puncture diameters; elytral punctation (average interspaces larger than puncture diameters) sometimes turning into more raspy, uneven (average interspaces about equal to puncture diameters) with inconspicuous coriaceous microsculpture, punctures not always discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 229) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 217, inner sclerites as in Figs 218-219. Female ringstructures as in Figs 220-221.

COMPARATIVE NOTES: For the western ranges of North America the similar congeners are listed under *O. columbiensis* (and the East Palaearctic ones under *O. laevis*). Only in the eastern part of North America its range overlaps with that of *O. ashei*, these two species differ in size and numerous other characters (mid-antennal

segments, apex of tergite X). The only species with chance of confusion is *O. columbiensis*, but it has strong microsculpture all over the dorsal surface of the head and the only shinier line is that of the frontoclypeal suture.

DISTRIBUTION: Known from the belt of the northern hardwood forest, from East Siberia and the Russian Far East through Alaska to the northern and highest parts of both the Pacific Coast Ranges and the Appalachian Mountains in North America.

BIONOMICS: Specimens were found on banks of shaded streams, under stones, rotten wood, on sandy banks of rivers, among muddy gravel on gravelbanks, in moss on rocks at stream, in flood debris, various plant debris on banks, wet leaf litter packs at stream, sometimes among grasses growing on gravelbeds.

Ochtheophilus praepositus Mulsant & Rey, 1878 Figs 29-31, 207-211, 230, 528, 574

Ochtheophilus praepositus Mulsant & Rey, 1878: 812. – Makranczy, 2001: 177, 180.

Ancyrophorus ruteri Jarrige, 1949: 60, syn. nov. – Fagel, 1951a: 9.

Ancyrophorus grigolettoi Fagel, 1951a: 10. – Fagel, 1951c: 251.

TYPE MATERIAL EXAMINED: *Ochtheophilus praepositus* – LECTOTYPE (♂, here designated): “H. Pyr.; Pandellé \ ♂ \ Hautes-Pyrénées [*+43.00/-06.11*] \ Lectotypus; *Ochtheophilus praepositus* Mulsant & Rey; [on the back] des. Makranczy, 1999 \ *Ochtheophilus praepositus* Mulsant & Rey; det. Makranczy, 1999” (coll. Rey, MHNL). – PARALECTOTYPES (2): same data as lectotype (coll. Rey, MHNL, 2). *Ancyrophorus ruteri* – HOLOTYPE: “Saint-Pierre de Chartreuse, 900m [*+45.34/+05.82*], VII-1947, leg. V. Planet” (coll. Jarrige, MNHP). *Ancyrophorus grigolettoi* – HOLOTYPE: “Carnia, Verzegnis, Intissans, rio..., 300-400m [*+46.38/+12.98*], 10.VI. au 4.VII.1950, leg. G. Fagel” (ISNB). PARATYPES (3): same data as holotype (ISNB, 1). – “Tirol, prov. de Bolzano, Prato, Val Tires, 300-400m [*+46.47/+11.52*], 12.VI.1949, leg. G. Fagel” (ISNB, 1). – “Bosnia, Pazarić, Krupa [*+43.80/+18.15*], 8.VIII.1929, leg. A. d’Orchymont” (ISNB, 1).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 528. Measurements (n=10): HW = 0.58 (0.55-0.62); TW = 0.52 (0.49-0.57); PW = 0.64 (0.59-0.71); SW = 0.81 (0.74-0.88); AW = 0.87 (0.78-0.94); HL = 0.44 (0.42-0.48); EL = 0.20 (0.19-0.21); TL = 0.08 (0.07-0.10); PL = 0.52 (0.48-0.56); SL = 1.06 (0.97-1.15); SC = 0.97 (0.89-1.05); FB = 2.07 (1.94-2.21); BL = 3.66 (3.17-3.90) mm. Head almost black, pronotum and abdomen blackish dark brown with occasional reddish tint. Elytra slightly reddish dark brown. Mouthparts, legs and antennae very dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex usually without conspicuous setae, but occasionally slightly larger setae observed near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 574. Clypeus with scattered, tiny punctures (and colliculate microsculpture), trapezoid, corners rounded, anterior edge gently arched; separated by an impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape.

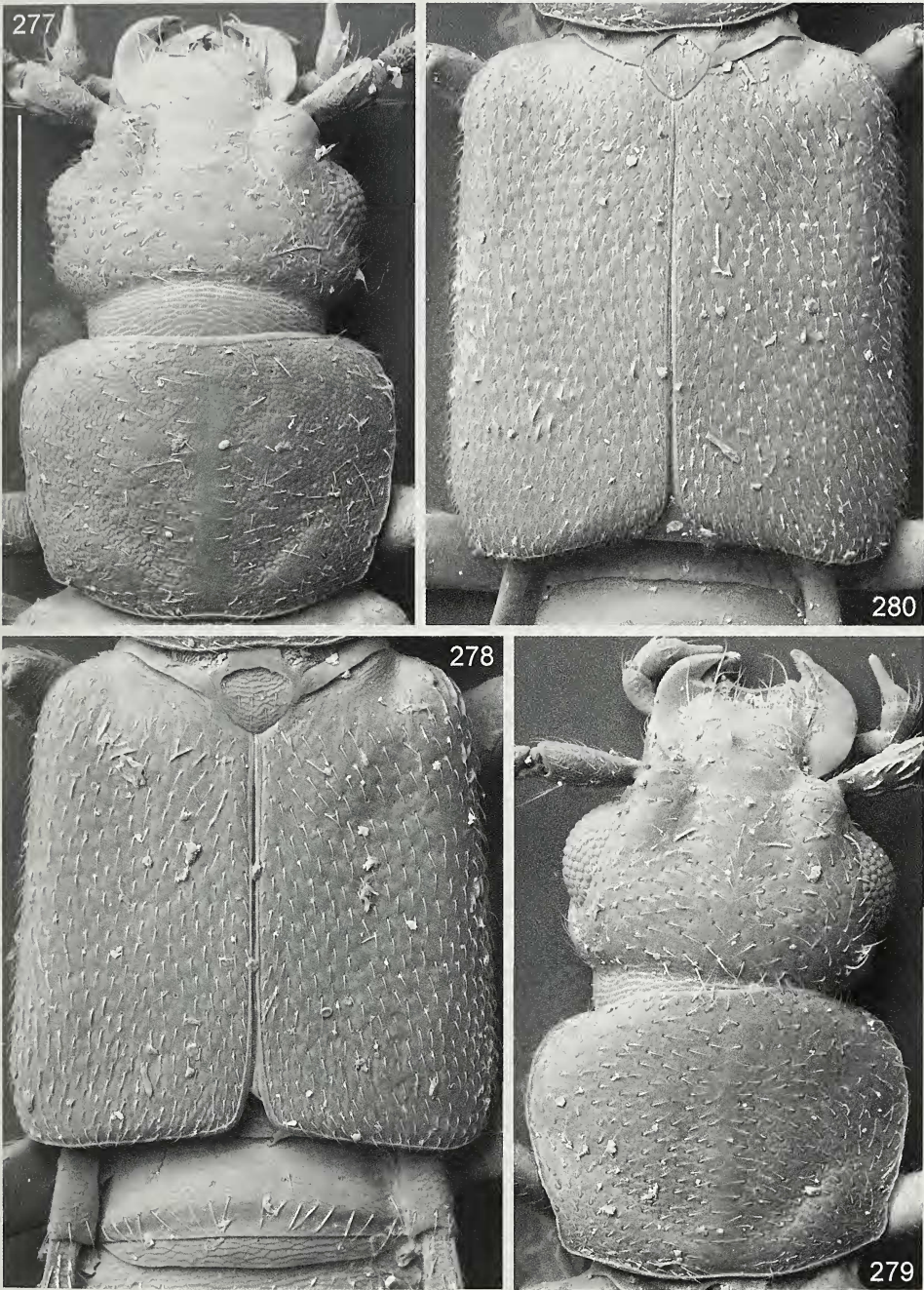
Temples bulging, evenly curved, barely longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, oblique impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head rather deep but sparse, mostly confined to posterior part and sides, on pronotum also conspicuous but more evenly spaced, average interspaces 1.5x puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 230) basal edge evenly arched, but straight at a short distance in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 207, inner sclerites as in Figs 208-209. Female ringstructures as in Figs 210-211.

COMPARATIVE NOTES: Very common species in mountainous areas of Europe, with a great range of variability, therefore can be confused with a number of species. The most similar is *O. rosenhaueri*, a generally much rarer species with a similar shaped inner sclerite in the aedeagus. Usually they can be separated by the more elongate antennae and elytra of *O. rosenhaueri*, but there are unusual specimens in both species. In females the different form of tergite IX provides a fair chance of separation. Other similar species are *O. carnicus* (with swollen, asymmetrical antennomere 7) and *O. lenkoranus* (produced basal edge of tergite VIII), more similar to *O. rosenhaueri* in their more slender and elongate antennae, but closer to *O. praepositus* in their shorter elytra.

NOTE: Mulsant and Rey (1878) credited L. Pandellé with the authorship of *O. praepositus*. Although Pandellé is likely to be more than just collector of the specimens, there is no explicit statement that he provided any description. Therefore, Mulsant and Rey are the authors of this name.

DISTRIBUTION: For such an extremely common and dominant species as this, the distribution range is not that wide: from the Pyrenées to the whole Alps and Carpathians (where it is the most common) through the northern Balkans to the Caucasus and Turkey.



FIGS 277-280

(277-278) *Ochtheophilus kirschenblatti* sp. n.; head and pronotum (277), elytra (278). (279-280) *O. schuelkei* sp. n.; head and pronotum (279), elytra (280). All SEM, dorsal views. Scale bar = 0.4 mm for 277-279, 0.5 mm for 280.

BIONOMICS: Specimens were collected most frequently from sprayed moss at waterfalls and on rocks in faster mountain streams; in this habitat it is a common and dominant species in most part of Europe. Besides, it was also encountered in a wide range of habitats and situations: wet leaf litter packs at stream in mixed forest, willow moss (*Fontinalis* sp.) and stringy moss (*Leptodictyum* sp.), sandy-gravelly banks of streams in *Abies* and *Picea* forests, even more muddy spots and under stones on river-bank, sweep-netted on wet meadow, captured by car-net, flew to light. Also recorded on stems of vegetation in flooded areas.

***Ochtheophilus rosenhaueri* (Kiesenwetter, 1850)** Figs 28, 212-216, 231, 527, 572

Trogophloeus rosenhaueri Kiesenwetter, 1850: 220. – Kiesenwetter, 1851: 428.

Ancyrophorus rosenhaueri (Kiesenwetter). – Kraatz, 1857: 887. – Ganglbauer, 1895: 668.

Ochtheophilus rosenhaueri (Kiesenwetter). – Herman, 1970: 385. – Makranczy, 2001: 181.

Trogophloeus longipennis Fairmaire & Laboulbène, 1856: 614.*

Ancyrophorus jailensis Scheerpeltz, 1950: 57, 66, **syn. nov.**

Ancyrophorus gracilis Fagel, 1951a: 6. – Fagel, 1968: 192

Ancyrophorus corsicus Fagel, 1956: 58, **syn. nov.**

*starting with Kraatz, 1857 the use of the name '*longipennis*' is totally mixed up, and such confusing references are omitted here

TYPE MATERIAL EXAMINED: *Trogophloeus rosenhaueri* – LECTOTYPE (here designated): “Kiesenwetter \ Sammlung; Cl. Müller \ Rosenhau-; eri; Kiesw. \ Sammlung; Clemens Müller \ Tirolis [Tirol *+47.00/+11.00*]; D. Rosenhauer \ Lectotypus; Trogophloeus; rosenhaueri Kiesenwetter; [on the back] des. Makranczy, 1999 \ Ochtheophilus; rosenhaueri Kiesenwetter; det. Makranczy, 1999” (ZSMC). – PARALECTOTYPES (3): same data as lectotype (ZSMC, 3). *Trogophloeus longipennis* – LECTOTYPE (♀, here designated): “2006 \ longipennis \ Muséum Paris; 1906; Coll. L. Fairmaire \ Tarbes [*+43.23/+00.08*]; Pandellé; (no. 2006) \ Lectotypus; Trogophloeus; longipennis Fairm. & Lab.; [on the back] des. Makranczy, 1999 \ ♀ \ Ochtheophilus; rosenhaueri Kiesenwetter; det. Makranczy, 1999” (MNHP). – PARALECTOTYPE (1): “Tarbes; Pandellé; (no. 2006) \ remounted from; original card \ Paralectotypus; Trogophloeus; longipennis Fairm. & Lab.; [on the back] des. Makranczy, 1999 \ ♀ \ Ochtheophilus; rosenhaueri Kiesenwetter; det. Makranczy, 1999” (MNHP, 1♀). *Ancyrophorus jailensis* – LECTOTYPE (here designated): “Iaila-Gebirge [*+44.53/+34.12*]; Krim, Mocarski \ Typus; Ancyrophorus; jailensis; O. Scheerpeltz \ Lectotypus; Ancyrophorus; jailensis Scheerpeltz; [on the back] des. Makranczy, 1999 \ Ochtheophilus; rosenhaueri Kiesenwetter; det. Makranczy, 1999”, NHMW. *Ancyrophorus gracilis* – HOLOTYPE: “Carnia, Moggio, riv. Fella, 400m [*+46.42/+13.20*], 23.VI.1950, leg. G. Fagel” (ISNB). – PARATYPES (8): “Carnia, Verzegnis, Intissans, rio..., 300-400m [*+46.38/+12.98*], 10.VI. au 4.VII.1950, leg. G. Fagel”, (ISNB, 2, MNHP, 1). – “Carnia, Venzona, torrente Venzonazza, 300m [*+46.33/+13.15*], 20.VI.1950, leg. G. Fagel”, (ISNB, 1). – “Carnia, Treppo, torrente Ortegias, 1000m [*+46.53/+13.02*], 17.VI.1950, leg. G. Fagel”, (ISNB, 2). – “Carnia, Villa Santina, torrente Degano, 400m [*+46.40/+12.92*], 20.VI.1950, leg. G. Fagel” (ISNB, 2). – “Garda-See [Lago di Garda] [*+45.67/+10.68*], leg. Breit” (ISNB, 1). *Ancyrophorus corsicus* – HOLOTYPE: “Corse, Vizzavona [Vizzavone], mousses de ruisseaux, 900-1100m [*+42.12/+09.15*], V.1950, leg. G. Fagel” (ISNB). – PARATYPES (16): same data as holotype (ISNB, 9, coll. Scheerpeltz, NHMW, 1, coll. Jarrige, MNHP, 1). – “Corse, Vizzavona [Vizzavone], mousses de Fulminato, 900-1100m [*+42.12/+09.13*], V.1950, leg. G. Fagel” (ISNB, 3, coll. Scheerpeltz, NHMW, 2).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 527. Measurements (n=10): HW = 0.56 (0.54-0.59); TW = 0.51 (0.49-0.53); PW = 0.59 (0.54-0.63); SW = 0.76 (0.72-0.80); AW = 0.81 (0.74-0.90); HL = 0.43 (0.40-0.45); EL = 0.20 (0.19-0.21); TL = 0.08 (0.07-0.09); PL = 0.49 (0.46-0.52); SL = 1.07 (0.99-1.15); SC = 0.98 (0.90-1.05); FB = 2.02

(1.90-2.12); BL = 3.51 (3.20-3.79) mm. Head almost black, pronotum and abdomen blackish dark brown with occasional reddish tint. Elytra slightly reddish dark brown. Mouthparts, legs and antennae very dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle o tibiae. Elytral apex with a few slightly longer setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 572. Clypeus with scattered, tiny punctures (and colliculate microsculpture), trapezoid, corners rounded, anterior edge gently arched; separated by an impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, barely longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, oblique impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head rather deep but sparse, mostly confined to posterior part and sides, on pronotum also conspicuous but more evenly spaced, average interspaces 1.5x puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 231) basal edge evenly arched, but straight at a short distance in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 212, inner sclerites as in Figs 213-214. Female ringstructures as in Figs 215-216.

COMPARATIVE NOTES: This species is extremely similar to *O. praepositus*, and although their distribution ranges do not overlap perfectly, they are often found in the same microhabitats and can be separated with most difficulty. Apart from the more

slender antennae and more elongate elytra of *O. rosenhaueri*, in doubtful situations males are best separated by the inner sclerites of the aedeagi, females by the slightly different form of tergites IX. Other possibly confused species (by similar size and slender antenna) is *O. lenkoranus*, but it is very different in the inner sclerite of the aedeagus and the female ringstructure, in most specimens by the basal margin of tergite VIII. The specimens known from Corse (Corsica) have much more slender/elongate antennae, but male genitalia are identical to those in the rest of the distribution range.

NOTE: Dr. D. Drugmand (Brussels) kindly provided photocopies of the relevant pages from L. Pandellé's locality key (a handwritten notebook), which allowed adequate labeling of the types of *Trogophloeus longipennis*.

DISTRIBUTION: Known from France (Alpes-Maritimes and Corsica) through the Alps and northern Carpathians to the whole northeastern Mediterranean Basin (including Sicily) to the Caucasus.

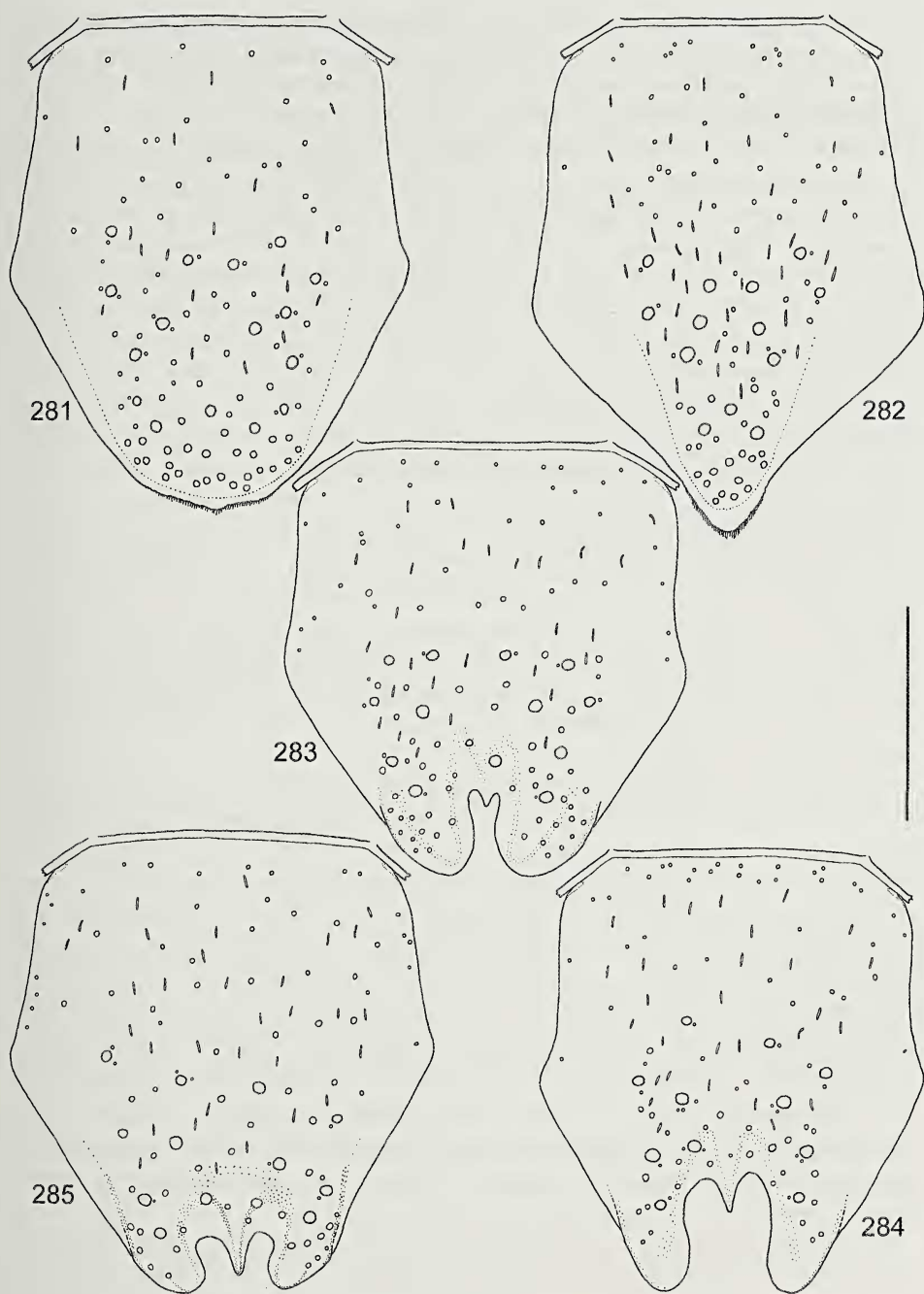
BIONOMICS: Specimens were collected from willow moss (*Fontinalis* sp.) on streambank, entirely soaked moss, moss at waterfall, wet sand and gravel, flood debris, muddy spots on bank of small stream in mixed forest, under stones on riverbank.

Ochtheophilus solodovnikovi Gildenkova, 2000 Figs 12, 159-163, 175-176, 535, 584
Ochtheophilus solodovnikovi Gildenkova, 2000: 1185. – Gildenkova, 2000b: 847.

TYPE MATERIAL EXAMINED: *Ochtheophilus solodovnikovi* – PARATYPES (2): “Краснодарск.[ий] кр.[ай] Красная Поляна р.[ека] Галясы, 1400м, 23.VIII.1995 М. Савицкий,” (coll. Solodovnikov, ZMUC, 1♂, 1♀).

OTHER MATERIAL: **RUSSIA:** Краснодарский край, 7км NW Бабук-Аула, Ю. скл. г. Хуко [7km NW Babuk-Aul, S slopes of Mt. Khuko], 1600м *+43.94/+39.79*, 24.VI.1994, leg. A. Солодовников, forest, stream edge, coll. Solodovnikov, ZMUC (1♂, 1). – NW Caucasus, 12km E of vill. Krasnaya Polyana, forest zone, 700-800м *+43.66/+40.35*, 29.VII.1994, leg. A. Solodovnikov, coll. Solodovnikov, ZMUC (1). – W Caucasus, vill. Temnoleskaya, 45km S of Maykop, 700м *+44.21/+40.00*, 8.VI.1999, leg. A. Solodovnikov coll. Solodovnikov, ZMUC (1), FMNH (1♂), MHNG (1♂, 1♀), NHMW (1), HNHM (1♂, 1♀, 1), coll. Schülke (1♂). — **GEORGIA:** Abkhazia, Gumistinskiy Nature Reserve, Tsumuri, Vostochnaya Gumista River bank, 420м *+43.23/+41.07*, 22.VII.1990, leg. V.I. Gusarov, coll. Gusarov, ZMUN (2). – Cauc. min. bor. Trialetskij Chreb., Bakuriani, 1800-2200м *+41.71/+43.54*, 4-7.VII.1986, leg. D.W. Wrase & M. Schülke, coll. Schülke (2♀), HNHM (1♂).

REDESCRIPTION: Forebody as in Fig. 535. Measurements (n=10): HW = 0.67 (0.64-0.69); TW = 0.62 (0.59-0.665); PW = 0.81 (0.78-0.85); SW = 0.90 (0.84-0.95); AW = 1.03 (0.98-1.13); HL = 0.50 (0.48-0.51); EL = 0.21 (0.19-0.22); TL = 0.12 (0.11-0.13); PL = 0.62 (0.58-0.65); SL = 1.09 (1.02-1.15); SC = 0.99 (0.93-1.06); FB = 2.29 (2.12-2.39); BL = 4.18 (3.62-4.51) mm. Body uniformly very dark brown, almost black, but with a distinct reddish tint. Rare lighter specimens with only basal antennomeres, mouthparts and legs reddish medium to dark brown, elytra occasionally more reddish dark brown. Body with slightly above average lustre mostly due to occasional shinier elevated spots on head and pronotum. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with a couple of very long setae near sutural corners. Last tarsomere with a few setae only.



FIGS 281-285

Tergites X; *Ochtheophilus angustior* (Bernhauer), ♂ (281), same, ♀ (282), *O. omalinus* (Erichson), ♂ (283), same, ♀ (284), *O. szeli* sp. n., ♂ (285). Scale bar = 0.1 mm for 281-282, 0.115 mm for 283-285.

Forebody. Antenna as in Fig. 584. Clypeus sparsely and finely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by an impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with a few isolated impressed spots. Temples bulging, evenly curved, noticeably longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral with two shallow, oval, oblique impressions behind scutellum and disc shallowly, longitudinally impressed, connecting larger, slightly impressed anterior and posterior halves (behind border of latter punctuation abruptly changes to much finer). Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head deep but sparse, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII basal edge in females (Fig. 176) more strongly angular, slightly more evenly arched in males (Fig. 175); apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 159, inner sclerites as in Figs 160-161. Female ringstructures as in Figs 162-163.

COMPARATIVE NOTES: A very characteristic, large sized species, easily distinguishable by the wide pronotum with conspicuous marginal bead and most importantly the basal formation of tergite VIII that only group it with the much smaller *O. lenkoranus*.

DISTRIBUTION: The species is so far known from the greater area of the Caucasus.

BIONOMICS: Specimens were collected at forest stream, on stream- and river-bank.

Ochtheophilus tatricus (Smetana, 1967)

Figs 184-188, 202, 533, 562

Ancyrophorus tatricus Smetana, 1967: 384, 386.*Ochtheophilus tatricus* (Smetana). – Lohse & Lucht, 1989: 400. – Makranczy, 2001: 179.

TYPE MATERIAL EXAMINED: HOLOTYPE (♀): “Slov.[akia] Vys.[oké] Tatry, Tatr.[anská] Lomnica [ca. 900m]; Smetana 1.VII.1956 a” (coll. Smetana, CNCI, no. 16784). – PARATYPE (1): same data as holotype (coll. Smetana, CNCI, 1♂).

OTHER MATERIAL: **FRANCE**: Savoie, Plan-Lachat, s/Valloire, 2000m *+45.09/+06.43*, 29.VIII.1967, leg. A. Comellini, MHNG (1♂). – dept. Alpes-Maritimes, Roquebillière (c6), vallée Gordolasque *+44.04/+07.36*, 21.V.1969, leg. M. Tronquet, détrit. inond., coll. Tronquet (1♂). – **GERMANY**: Schwarzwald, Bonndorf *+47.82/+08.34*, VI.1912, leg. W. Sattler, coll. Sattler, SMFD (1♂). – **SWITZERLAND**: Kt. Wallis, Walliser Alpen, Zinal, 1700m *+46.14/+07.62*, 5.VII.2002, leg. Mehnert, Nadelwald, Bachufer, in Moos, coll. Gollkowski (1). – **AUSTRIA**: Steiermark, Hochschwabgebiet, Unt. Ring, 960m, Gesiebe hohler Ahorn *+47.63/+15.18*, 3.VII.1992, leg. A. Kapp, coll. Kapp (1). – Tirol, Stanzach/Lech, Namloser Tal *+47.37/+10.62*, 24.V.1995, leg. K. Renner, Autokätscher, coll. Gollkowski (1), coll. Renner (1), HNHM (1). – Tyr., Kitzbühel *+47.45/+12.39*, 24.V.1995, leg. Breit, coll. Scheerpeltz, NHMW (1♂). – Kärnten, Gailtaler Alpen *+46.63/+13.56*, coll. Bierig, FMNH (1). – **ITALY**: Trentino, E Trento, N Roncesgno, 700-1600m *+46.08/+11.39*, 26.VI.1995, leg. V. Assing, Autokescher, coll. Assing (1♂). – Vestenavecchia / Tregnago (VR) (car net) *+45.54/+11.19*, 20.IV.1996, leg. A. Zanetti, coll. Zanetti (1). – Dolomiti (TN), San Martino di Castrozza *+46.63/+13.56*, 29-31.VII.1980, leg. F. Montemurro (mt 1467), HNHM (1♂). – **SLOVENIA**: Steiner Alpen, Logarska Dolina, 810m *+46.40/+14.63*, 5.VI.1999, leg. A. Kapp, coll. Kapp (1). – **BOSNIA-HERZEGOVINA**: Cernesnica pl., [pečina] Ledenica *+44.61/+16.44*, NHMW (1♀). – Bosnien, Kraljevska Sutjeska - Zadolci *+44.12/+18.20*, 5.V.1990, leg. P. Wunderle, autokätscher, coll. Wunderle (1♂), SDEI (1♀). – **SLOVAKIA**: Branisko, Sl'ubica, 600-900m *+48.99/+20.87*, 16.VI.1984, leg. J. Janák, coll. Janák (1). – Závadka nad Hronom env., Machnatá dolina *+48.79/+19.97*, 24.V.2009, leg. M. Mantič, moss on stones in brook, coll. Mantič (1). – **ROMANIA**: jud. Braşov, Culoarul Rucăr-Bran, 2.0 km SW Fundăţica, Peştera Ulucelor, stream from entrance, 45°24'35"N, 25°15'47"E, 950 m, 16.VII.2011, leg. Gy. Makranczy (459), moss and leaf litter at rocks in small cascades, flotation, HNHM (1). – **UKRAINE**: Carpath. or., Worochta [Vorokhta], Prut [river] *+48.29/+24.57*, 12.VI.1911, leg. Lokay, coll. Lokay, NMPC (1).

REDESCRIPTION: Forebody as in Fig. 533. Measurements (n=10): HW = 0.59 (0.54-0.60); TW = 0.55 (0.51-0.56); PW = 0.66 (0.58-0.69); SW = 0.76 (0.72-0.79); AW = 0.86 (0.83-0.90); HL = 0.44 (0.40-0.48); EL = 0.15 (0.14-0.18); TL = 0.12 (0.10-0.14); PL = 0.53 (0.48-0.57); SL = 0.96 (0.90-1.03); SC = 0.88 (0.82-0.94); FB = 2.01 (1.88-2.10); BL = 3.48 (3.00-4.20) mm. Head, pronotum and abdomen dark brown with slight reddish tint; head often darker, almost black. Elytra somewhat reddish medium to dark brown, same colour as antennae, mouthparts and legs; in case of lighter specimens scutellar area to shoulders darker and epistomal sulcus appears as transversal black line. Body appearing rather dull, especially head and pronotum with fine but very strong microsculpture. Pubescence extremely fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with fine and much longer setae on apices. Head anterior eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with at least two conspicuously longer setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 562. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supra-antennal prominences well developed, feebly separated from clypeus/vertex by

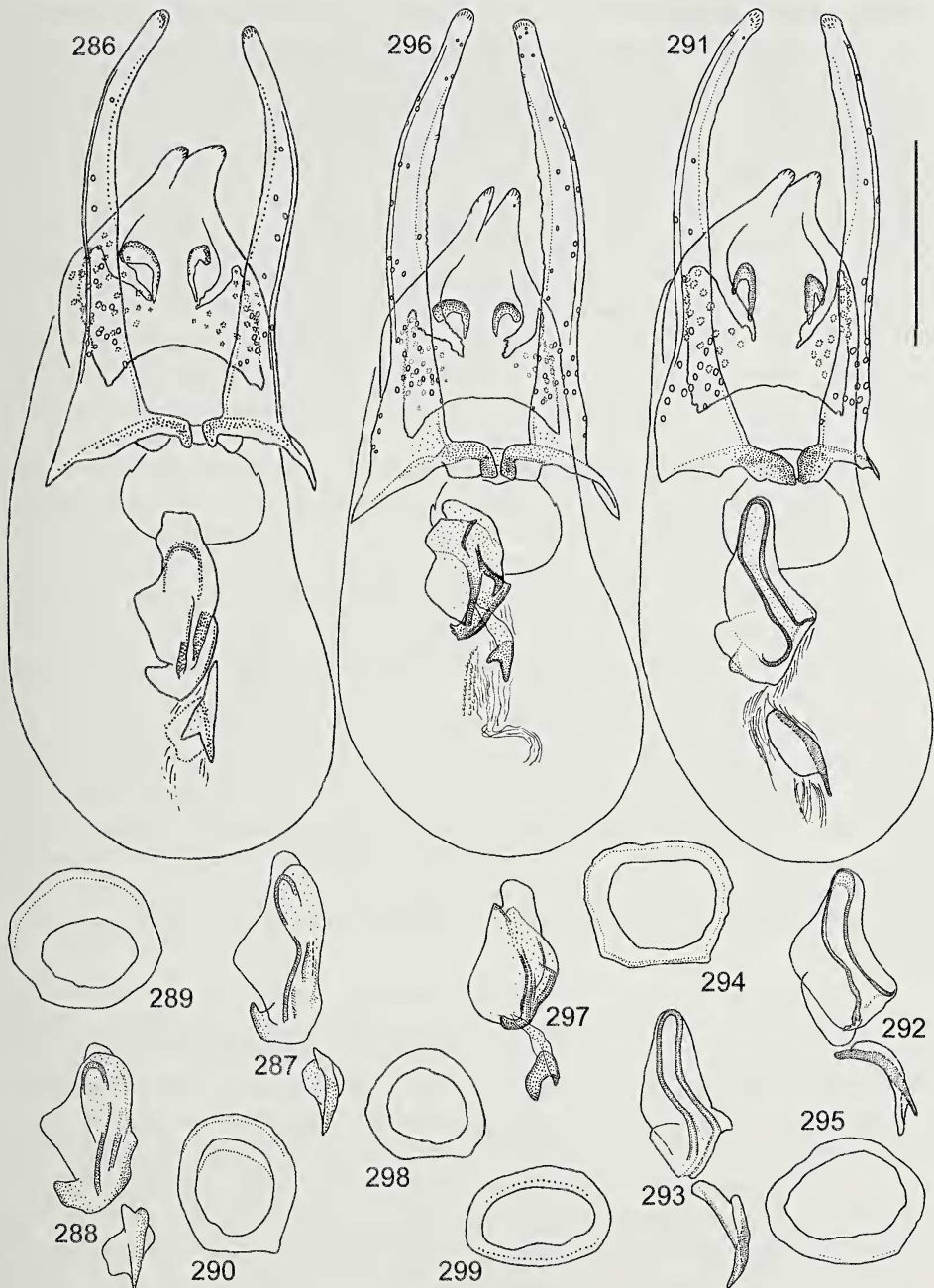
impressions. Vertex with oblique impressions in middle almost joining in U-shape. Temples slightly bulging, evenly curved, little longer than half of eye length. Neck shiny, separated only by a weakly impressed transversal groove, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head shallow and sparse, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation much deeper, more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 202) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 184, inner sclerites as in Figs 185-186. Female ringstructures as in Figs 187-188.

COMPARATIVE NOTES: This species is similar to *O. brachypterus* and *O. legrosi* in having the very dull pronotum with obscured punctuation, but differs from them by the elongate (narrower) and conspicuously parallel-sided (straight) elytra as well as usually being the smallest of the three.

DISTRIBUTION: Known from France (Alpes-Maritimes) through the Alps, northern Italy, the Carpathians to the northern Balkans.

BIONOMICS: This very rare species (almost always collected as singleton) lives in wet moss at streams, together with the common *O. praepositus*. The habitat is not confined to higher elevation (like in the related *O. brachypterus*) but bound to caves or shaded environments of abundant underground cavities. On rare occasions specimens were captured in flight. The collector of the holotype gave the following information (A. Smetana, pers. comm.): the type specimens were collected in one of the shady, small valleys in coniferous forest just above Tatranská Lomnica. He found it in entirely water soaked wet moss on big rocks in wild creeks. This confirms my observation that this species indeed lives at cold, humid, forest-covered, densely vegetated habitats; not only in moss, but wet leaf litter. A great percentage of the known specimens was collected by car-nets.



FIGS 286-299

(286-290) *Ochtheophilus gusarovi* sp. n.; aedeagus (286), inner sclerites (287-288), female ring-structures (289-290). (291-295) *O. venustulus* (Rosenhauer); aedeagus (291), inner sclerites (292-293), female ringstructures (294-295). (296-299) *O. qingyianus* sp. n.; aedeagus (296), inner sclerite (297), female ringstructures (298-299). Scale bar = 0.05 mm for 298-299, 0,055 mm for 289-290, 0.06 mm for 294-295, 0.1 mm for 286-288, 296-297, 291-293.

Ochthephilus wunderlei sp. nov.

Figs 233, 244-248, 530, 571

TYPE MATERIAL: HOLOTYPE (♂): "CYPRUS: [Nicosia distr.] Troodos-Geb., Marathassa - Pedoulas, Ayios Joannis, 600m [34°59'26"N, 32°49'49"E, 680m], 01.IV.1996[1995], [leg.] P. Wunderle" (MHNG). – PARATYPES (42): same data as holotype (coll. Wunderle, 1♂, SDEI, 1♀, SMNS, 1♀, ISNB, 1♀, USNM, 1♀, ZMHB, 1♂, coll. Schülke, 1♂). – "Troodos-Geb. Platres - Prodhromos, 1350m [*+34.92/+32.83*], 01.IV.1996, leg. P. Wunderle, geschwemmt" (coll. Wunderle, 1♀, SEMC, 1, SNMC, 1♀, CNCI, 1, MNHP, 1). – "Troodos-Geb. S Prodhromos, 1350m [*+34.92/+32.83*], 01.IV.1995, leg. V. Assing, bachschlucht" (coll. Assing, 1). – "Paphos Forest, Kykkos - Pera Vasa, 400-650m [*+34.95/+32.72*], 09.IV.1995, leg. P. Wunderle" (coll. Wunderle, 1). – "Agios Nikolaos [*+35.10/+32.88*], 16.IV.1995, leg. H. Schmid" (NHMW, 1). – "TURKEY: Antalya, umg. Manavgat, 900m [Yaylaalan, 36°56'N, 31°28'E], 31.XII.1990, leg. V. Assing (7)" (coll. Assing, 2♂ 1♀, HNHM, 2♂, 2♀, BMNH, 1). – "Antalya, umg. Manavgat, 600m [*+36.77/+31.78*], 04.I.1991, leg. V. Assing (28)" (coll. Assing, 4♂, 2♀). – "SW-Turkey, umg. Manavgat, Yaylaalan, 850m [*+36.95/+31.48*], 31.XII.1990, leg. P. Wunderle (2)" (coll. Wunderle, 4). – "SW-Turkey, Güneycak bei Gündogmus, ca. 700m [*+36.80/+32.02*], 1.I.-7.I.1991, leg. P. Wunderle (19)" (coll. Wunderle, 10).

DESCRIPTION: Forebody as in Fig. 530. Measurements (n=10): HW = 0.55 (0.52-0.60); TW = 0.50 (0.46-0.53); PW = 0.58 (0.52-0.63); SW = 0.74 (0.68-0.80); AW = 0.78 (0.69-0.87); HL = 0.41 (0.38-0.45); EL = 0.20 (0.18-0.21); TL = 0.08 (0.07-0.09); PL = 0.46 (0.41-0.52); SL = 0.95 (0.88-1.02); SC = 0.87 (0.80-0.93); FB = 1.89 (1.70-2.10); BL = 3.49 (3.15-3.98) mm. Head blackish dark brown, abdomen dark brown with sometimes lighter areas (e.g. base of second tergite and adjoining laterosclerites. Pronotum mostly dark brown but with sometimes lighter areas near posterior margin or at posterior corners. Elytra medium to dark brown, scutellar area to shoulders and a transversal stripe at apex being darker. Legs medium brown, antennae and mouthparts dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Antenna as in Fig. 571. Clypeus sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge arched; separated by slightly impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, separated from clypeus/vertex by longitudinal impressions. Vertex with small but deep impressions in middle almost almost joining in V-shape. Temples slightly bulging, evenly curved, little shorter than half of eye length. Neck separated by a shallowly impressed transversal groove, microsculpture about the same as on head but with more transversal cells, no setation. Pronotum with a narrow marginal bead, fully visible in anterior corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides

slightly oblique and in inner halves more or less straight. Elytral surface with two shallow, oval impressions behind scutellum and slightly impressed anterior disc. Head with fine coriaceous/colliculate microsculpture (isodiametric cells), fading on elevated parts, stronger in impressions, on pronotum microsculpture almost the same. Punctuation on head generally sparse, from fine to rather coarse and deep, much stronger at sides and in impressions, on pronotum more evenly spaced, average interspaces somewhat larger than puncture diameters; elytral punctuation more coarse and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures more or less discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 233) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 244, inner sclerites as in Figs 245-246. Female ringstructures as in Figs 247-248.

ETYMOLOGY: The species is named after Dr. Paul Wunderle (Mönchengladbach, Germany), provider of a wealth of material in the early phases of this work.

COMPARATIVE NOTES: By external appearance this species is similar to the closely related *O. angustior* (distinguishable by the less acute apex of tergite X in females and the different inner sclerite of the aedeagus in males). However, since there are numerous species in this size range (*O. omalinus*, *O. andalusiacus*, *O. venustulus*) with great variability, the terminalia and genitalia must be checked.

DISTRIBUTION: Currently only known from Turkey (Antalya) and Cyprus.

BIONOMICS: Specimens were collected by the flotation method in a stream valley.

VII. *Ochtheophilus omalinus* species group

Ochtheophilus andalusiacus (Fagel, 1957) Figs 309-313, 332, 360, 364, 540, 581

Ancyrophorus andalusiacus Fagel, 1957: 704. – Fagel, 1968: 192.

Ochtheophilus andalusiacus (Fagel). – Herman, 1970: 384. – Pope, 1977: 24. – Makranczy, 2001: 180. – Lott, 2008: 18.

Ancyrophorus rivularis Smetana, 1967: 384, 388.

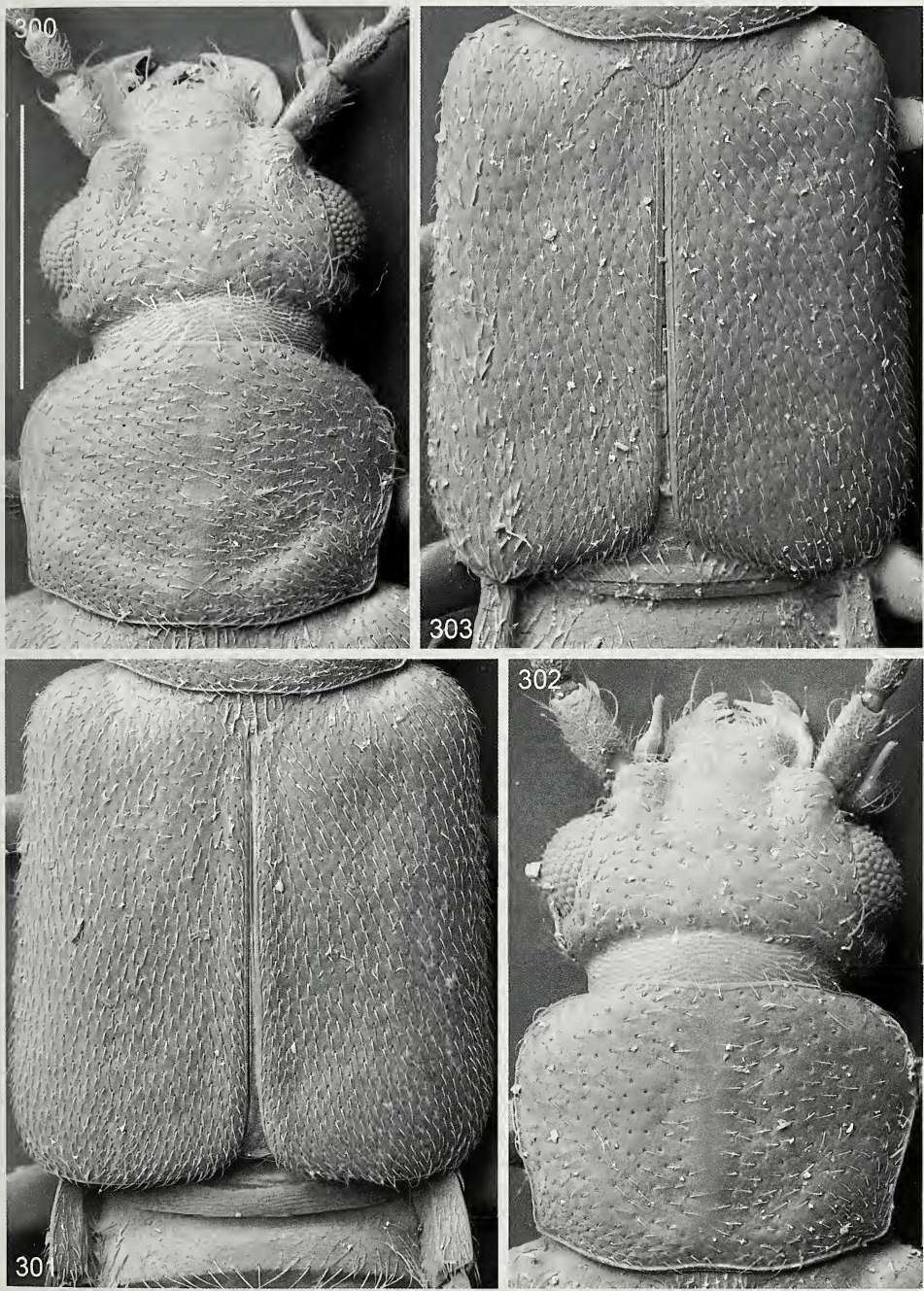
TYPE MATERIAL EXAMINED: *Ancyrophorus andalusiacus* – HOLOTYPE (♂): “Andalousie, environ de Ronda, Puente de la Ventilla, route de Malaga, km 7 [*+36.73/-05.08*], 8-20.V.1956, leg. G. Fagel” (ISNB). – PARATYPES (2): same data as holotype (ISNB, 1, BMNH, 1). *Ancyrophorus rivularis* – HOLOTYPE (♂): “Slovakia, Vysoké Tatry, Tatranská Lomnica [*+49.16/+20.28*], 1.VII.1956, leg. [A.] Smetana” (coll. Smetana, CNCI). – PARATYPE (1): “Slovakia, Lukov - Bardejov, Laborec (stream) [*+49.30/+21.25*], 7.VII.1959, leg. [A.] Smetana” (coll. Smetana, CNCI, 1).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 540. Measurements (n=10): HW = 0.53 (0.50-0.56); TW = 0.48 (0.45-0.50); PW = 0.58 (0.53-0.62); SW = 0.70 (0.65-0.78); AW = 0.76 (0.71-0.80); HL = 0.39 (0.34-0.43); EL = 0.19 (0.18-0.20); TL = 0.06 (0.05-0.07); PL = 0.45 (0.42-0.49); SL = 0.92 (0.85-0.98); SC = 0.84 (0.77-0.90); FB = 1.79 (1.65-1.89); BL = 3.19 (3.00-3.44) mm. Head, pronotum and abdomen blackish dark brown. Elytra reddish dark to medium brown, scutellar area to shoulders darker, blackish; occasional specimens with lighter elytra, even with lighter spot behind middle of suture. Antennae and mouthparts dark brown with occasional reddish tint, legs reddish medium to dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with one or two slightly larger setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 581, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transverse line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transverse groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 360) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate



FIGS 300-303

(300-301) *Ochtheophilus qingyianus* sp. n.; head and pronotum (300), elytra (301). (302-303) *O. szeli* sp. n.; head and pronotum (302), elytra (303). All SEM, dorsal views. Scale bar = 0.44 mm for 302, 0.5 mm for 300, 303, 0.55 mm for 301.

in middle; in females slightly more sinuate (convex) in middle. Tergite X with modified apical margin, in males as in Fig. 332, in females as in Fig. 364. Aedeagus as in Fig. 309, inner sclerites as in Figs 310-311. Female ringstructures as in Figs 312-313.

COMPARATIVE NOTES: The triad of species where this taxon can easily be confused also includes *O. omalinus* and *O. venustulus*, sharing the same formation of mid-antennal articles but differing in the apices of tergite X in both sexes: not irregularly serrate in the latter two species. Colouration can be confusing, as all three species may have lighter elytra, even with a distinct light spot around the suture behind the middle. In most cases *O. andalusiacus* has to be separated from *O. omalinus*: the latter has the middle apex of tergite almost straight but with a little concavity in the middle; *O. andalusiacus* has a peculiar formation of the apical corners (strongly sclerotized and evenly arched on inside), while the middle apex is just perceptibly convex, with no concavity in the centre. The unusual specimens with labels "Reinfeld i. Holst., 14.IV.1926, Bernitz" were identified by G. Benick as '*O. strandi*' and such specimens are responsible for the false record of the species from Central Europe.

DISTRIBUTION: Known from North Africa, Europe, Turkey and apparently introduced to eastern Canada (coastal areas).

BIONOMICS: Specimens were collected from riverbank and seashore (vegetable) debris, at waterfall, sandy-gravelly bank and debris on wet mosses, mainly willow moss (*Fontinalis* sp.), also captured by car-net.

***Ochtheophilus ashei* sp. nov.**

Figs 13, 314-318, 361-363, 544, 578

TYPE MATERIAL: HOLOTYPE (♂): "USA: NORTH CAROLINA: Macon Co., Nantahala River, 26km NWW Franklin, 35°15.37' N 83°39.24' W, 650m, 21.VIII.1998, leg. V.I. Gusarov" (SEMC). – PARATYPES (352): same data as holotype (SEMC, 4, AMNH, 2, coll. Gusarov, ZMUN, 99, HNHN, 4). – "TENNESSEE: Great Smoky Mountains National Park, Greenbrier Cove, 2000ft [*+35.70/-83.38*], 17.IX.1953, leg. D. Kistner, in wet moss on rocks in stream" (FMNH, 105, BMNH, 1, AMNH, 86, MNHP, 2, MHNG, 2, CASC, 1, USNM, 1, ISNB, 1, NHMW, 1, SMNS, 1, ZMHB, 1, SDEI, 1, HNHN, 8, coll. Schülke, 2, coll. Assing, 2). – "NEW HAMPSHIRE: Grafton Co., 2km NNE Warren, Rt. 118, Baker River, 43°56.42'N, 71°52.52'W, 300m, 21.IX.1998, leg. V.I. Gusarov, on rocks in stream" (coll. Gusarov, ZMUN, 19). – "Echo Lake, North Conway, NH [*+44.05/-71.16*], X-10.[19]05, [leg. F. Blanchard]" (MCZN, 1 ♀). – "MAINE: Mt. Katahdin, 1100' [*+45.89/-69.00*], 28.VII.1968, leg. D.R. Oliver" (CNCI, 1 ♀). – "Paris, ME [*+44.26/-70.52*], VII-3-[19]33, [leg.] C.A. Frost" (MCZN, 1 ♂ 1 ♀, HNHN, 1 ♀). – "MASSACHUSETTS: Merrimack River, after (downstream of) Tyngsborough [*+42.67/-71.42*], April 1901, [leg. F. Blanchard]" (MCZN, 1 ♀). – "CANADA: NEW BRUNSWICK: Queens Co., Welsford near Nerepis River, 45.4441°N, 66.3300°W, 27.VI.2006, leg. R.P. Webster, river margin, among grass and debris near water" (coll. Webster, 1 ♀). – "Restigouche Co., Jacquet River Gorge PNA, Jacquet River, 47.7765°N, 66.1277°W, 13.VIII.2010, leg. R.P. Webster, among moss on rocks in middle of river – collected by splashing rocks" (coll. Webster, 1 ♀).

OTHER MATERIAL: UNITED STATES: Tennessee: Great Smoky Mountains National Park, Greenbrier Cove, 2000ft [*+35.70/-83.38*], 17.IX.1953, leg. D. Kistner, in wet moss on rocks in stream, FMNH (25); Tennessee: Great Smoky Mountains National Park, Cherokee Orchard, 2-3000ft [*+35.68/-83.48*], 15.IX.1953, leg. D. Kistner, under stones, FMNH (48) (specimens considered superfluous). – NEW YORK state, Catskill Mts. [*+41.99/-74.38*], VI.1977, coll. Schülke (2), HNHN (3) (inexact locality). – NEW JERSEY: Phillipsburg [*+40.69/-75.20*],

20.IV.1915, leg. J.W. Green, CASC (11). – Phillipsburg, 14.VI.1930, leg. J.W. Green, CASC (1). – PENNSYLVANIA: Easton *+40.69/-75.22*, 20.VI.1915, leg. J.W. Green, CASC (4) (specimens discoloured).

DESCRIPTION: Forebody as in Fig. 544. Measurements (n=10): HW = 0.55 (0.54-0.59); TW = 0.49 (0.47-0.54); PW = 0.62 (0.60-0.69); SW = 0.78 (0.71-0.82); AW = 0.83 (0.78-0.88); HL = 0.41 (0.40-0.42); EL = 0.20 (0.19-0.21); TL = 0.07 (0.06-0.08); PL = 0.49 (0.46-0.55); SL = 0.96 (0.92-1.03); SC = 0.88 (0.85-0.94); FB = 1.91 (1.86-2.03); BL = 3.29 (2.95-3.61) mm. Whole body blackish dark brown with occasional slight reddish tint. Mouthparts and antennae blackish dark brown, legs sometimes lighter, dark brown, often more reddish; tarsi and both ends of tibiae reddish medium to dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 578, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transverse line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transverse groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to broadly rounded anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 361) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (pro-

truding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X with modified apical margin, in males as in Fig. 362, in females as in Fig. 363. Aedeagus as in Fig. 314, inner sclerites as in Figs 315-316. Female ringstructures as in Figs 317-318.

ETYMOLOGY: The species is named after my late PhD advisor at the University of Kansas, Dr. J. Steven Ashe, whose support made this project possible and who was also born near the type locality. The species was marked as new by A. Fauvel under the name '*Ancyrophorus nitidus*' (unpublished).

COMPARATIVE NOTES: By the shape of tergite X apex it is only similar to *O. andalusiacus*, the known areas of the two species barely overlap (possibly in the New Brunswick - Newfoundland area).

DISTRIBUTION: Known from the Appalachian Mountains in eastern North America.

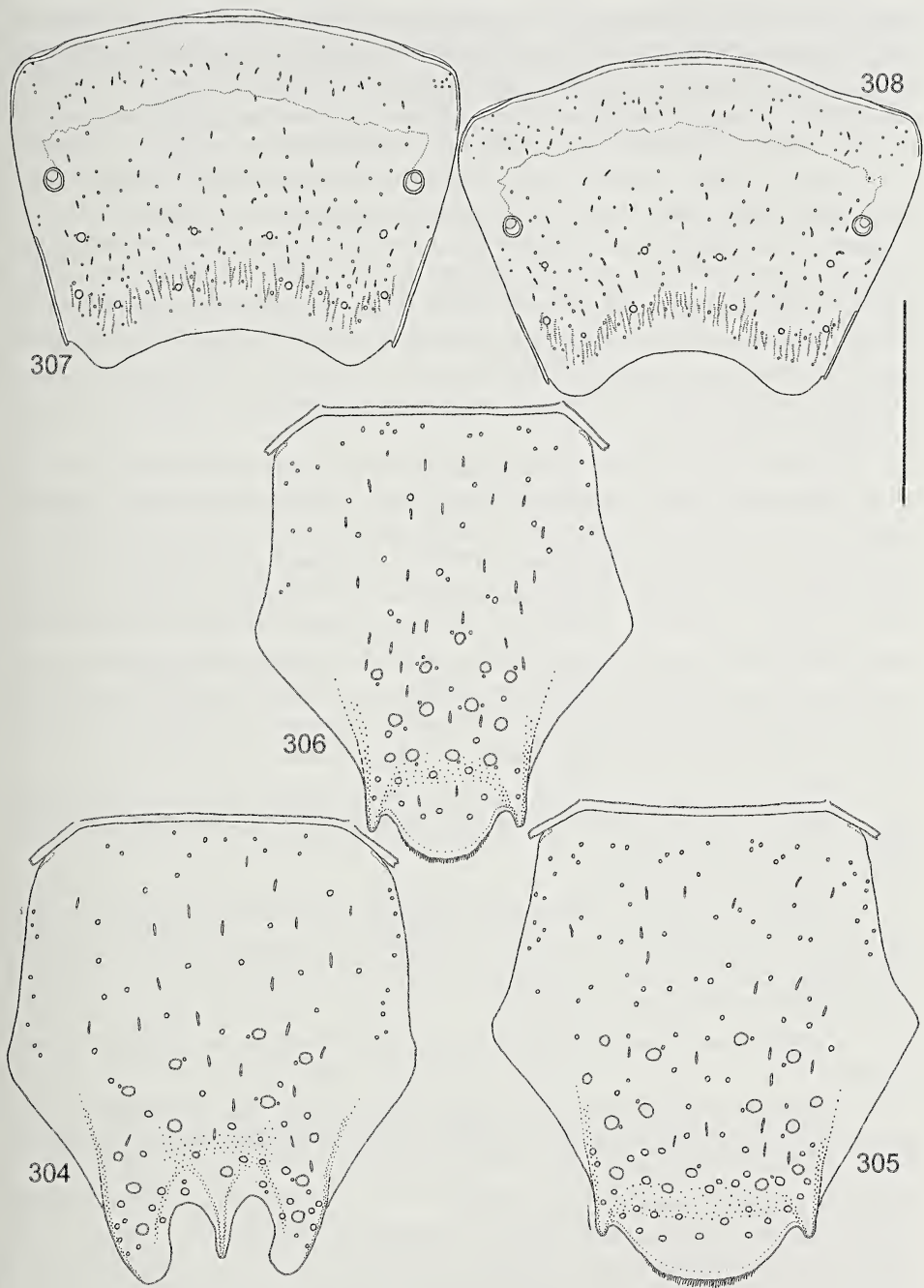
BIONOMICS: Specimens were collected at stream or river margin, among grass and debris near water and in moss on rocks.

***Ochtheophilus enigmaticus* sp. nov.** Figs 326-327, 348, 353, 365-368, 382, 393

TYPE MATERIAL: HOLOTYPE (♂): "CHINA: S-Shaanxi, Qinling Shan, river bank above Houzhenzi, 115km WSW Xi'an, 1450m, 33°50' N, 107°47' E, 5.VII.2001, leg. M. Schülke (C01-06), gravel bank (floating), mixed deciduous forest, moss, mushrooms (sifted)" (ZMHB). – PARATYPES (2): same data as holotype (coll. Schülke, 1 ♀, MHNG, 1 ♀).

DESCRIPTION: Measurements (n=3): HW = 0.51 (0.50-0.53); TW = 0.45 (0.44-0.47); PW = 0.57 (0.55-0.60); SW = 0.68 (0.66-0.71); AW = 0.74 (0.72-0.76); HL = 0.375 (0.365-0.39); EL = 0.18 (0.17-0.19); TL = 0.06 (0.05-0.06); PL = 0.44 (0.43-0.46); SL = 0.86 (0.82-0.90); SC = 0.82 (0.78-0.85); FB = 1.71 (1.64-1.79); BL = 3.21 (3.04-3.42) mm. Body blackish dark brown to pitch black, only elytra slightly lighter, dark brown. Legs, mouthparts and antennae dark brown, latter often blackish. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with a few slightly longer setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 382, antennomere 6 (Fig. 353) shorter and less wide than neighbours (articles 5 and 7). Clypeus (Fig. 326) sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 348) bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly



FIGS 304-308

(304-306) Tergites X; *Ochtheophilus szeli* sp. n., ♀ (304), *O. qingyianus* sp. n., ♂ (305), same, ♀ (306). (307-308) Tergites VIII; *O. forticornis* (Hochhuth) (307), *O. strandi* (Scheerpeltz) (308). Scale bar = 0.1 mm for 304-306, 0.25 mm for 307-308.

obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 327) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 393) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 365. Spermatheca as in Fig. 366, female ringstructures as in Figs 367-368.

ETYMOLOGY: The name of the species (of Greek origin) refers to the puzzling nature of this taxon, as most of the related species possess peculiar modifications in tergite X lacking in this species.

COMPARATIVE NOTES: This species is similar to other members of the *O. omalinus* group, can be distinguished based on the different inner sclerites of the aedeagus and structures of the terminalia: externally similar described members of the group have peculiar modifications of tergite X.

DISTRIBUTION: Currently only known from one locality in southern Shaanxi (China).

BIONOMICS: The labels list a series of collecting methods, flotation from gravelbanks and sifting of wet moss near water are the most likely for this species.

Ochtheophilus forticornis (Hochhuth, 1860) Figs 307, 338-342, 538, 583

Ancyrophorus forticornis Hochhuth, 1860: 553. – Scheerpeltz, 1950: 62.

Ochtheophilus forticornis (Hochhuth). – Herman, 1970: 384.

Ancyrophorus antennatus Watanabe & Shibata, 1961: 7, **syn. nov.** – Lee & Ahn, 2007: 115.

Ancyrophorus confinis Smetana, 1968: 230, **syn. nov.** – Kashcheev, 1989: 282.

TYPE MATERIAL EXAMINED: *Ancyrophorus forticornis* – LECTOTYPE (♀, here designated): "Ancyrophorus; forticornis; Hochhuth; Dauria \ 239. \ [V. Gusarov's large red card, blank] \ Daurien; Koul [*+48.00/+122.98*] \ Lectotypus; Ancyrophorus; forticornis Hochhuth; (on the back) des. Makranczy, 1999 \ Ochtheophilus; forticornis Hochhuth; det. Makranczy, 1999"

(ZMUM). *Ancyrophorus antennatus* – PARATYPES (3): “Daibosatsu.Pass [$+35.75/+138.85^*$]; Yamanashi pref.; May-20th 1960; Coll. Y. Watanabe \ {Paratype}; *Ancyrophorus antennatus*; Yasuaki Watanabe et; Yasutoshi Shibata, 1961.” (coll. Watanabe, 2♂, 1♀). *Ancyrophorus confinis* – HOLOTYPE (♂): “Mongolia, Uburchangaj aimak, Changaj Gebirge, Ongijn gol, 10 km ONO von Arbajcher, 1800m [$+44.55/+103.70^*$], 29.VI.1964., exp. Dr. Z. Kaszab” (HNHM). – PARATYPE (1): labelled as “allotypus”, same data as holotype (coll. Smetana, CNCI, 1♀).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 538. Measurements (n=10): HW = 0.56 (0.52-0.59); TW = 0.49 (0.47-0.52); PW = 0.61 (0.59-0.66); SW = 0.76 (0.69-0.85); AW = 0.80 (0.75-0.88); HL = 0.41 (0.38-0.45); EL = 0.195 (0.18-0.21); TL = 0.08 (0.07-0.09); PL = 0.49 (0.45-0.52); SL = 0.94 (0.88-1.02); SC = 0.86 (0.80-0.94); FB = 1.89 (1.77-2.03); BL = 3.46 (3.26-3.73) mm. Head, pronotum and abdomen blackish dark brown. Antennae, mouthparts and legs reddish dark brown, tarsi and both ends of tibiae often lighter. Elytra reddish dark brown, sometimes blackish, but often lighter, rather reddish or even medium brown. Body with greasy lustre mostly due to elytral setation plus forebody punctuation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head antieriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex often with two longer setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 583, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transverse line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transverse groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in the posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete. .

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately

transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 307) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 338, inner sclerites as in Figs 339-340. Female ringstructures as in Figs 341-342.

COMPARATIVE NOTES: This species is extremely similar to *O. strandi*, and can only be separated accurately by the apical arm of the inner sclerite of aedeagus. External diagnostic features with weak separation value. Specimens across the distribution range are extremely variable in terms of the antennal structure but the specimens known from Japan are rather consistent in having much more slender/elongate antennae; nevertheless male genitalia are identical.

DISTRIBUTION: Known from East Siberia and the Russian Far East, Mongolia, northeast China, Korea, Japan and most part of North America (but while particularly common in the Pacific Coast Ranges, becomes more and more rather rare in eastern direction). Based on a male specimen from Norway (Kåfjord, Lyngen, VI.1909, Münster) that surely belongs to this species, it also occurs in North Europe.

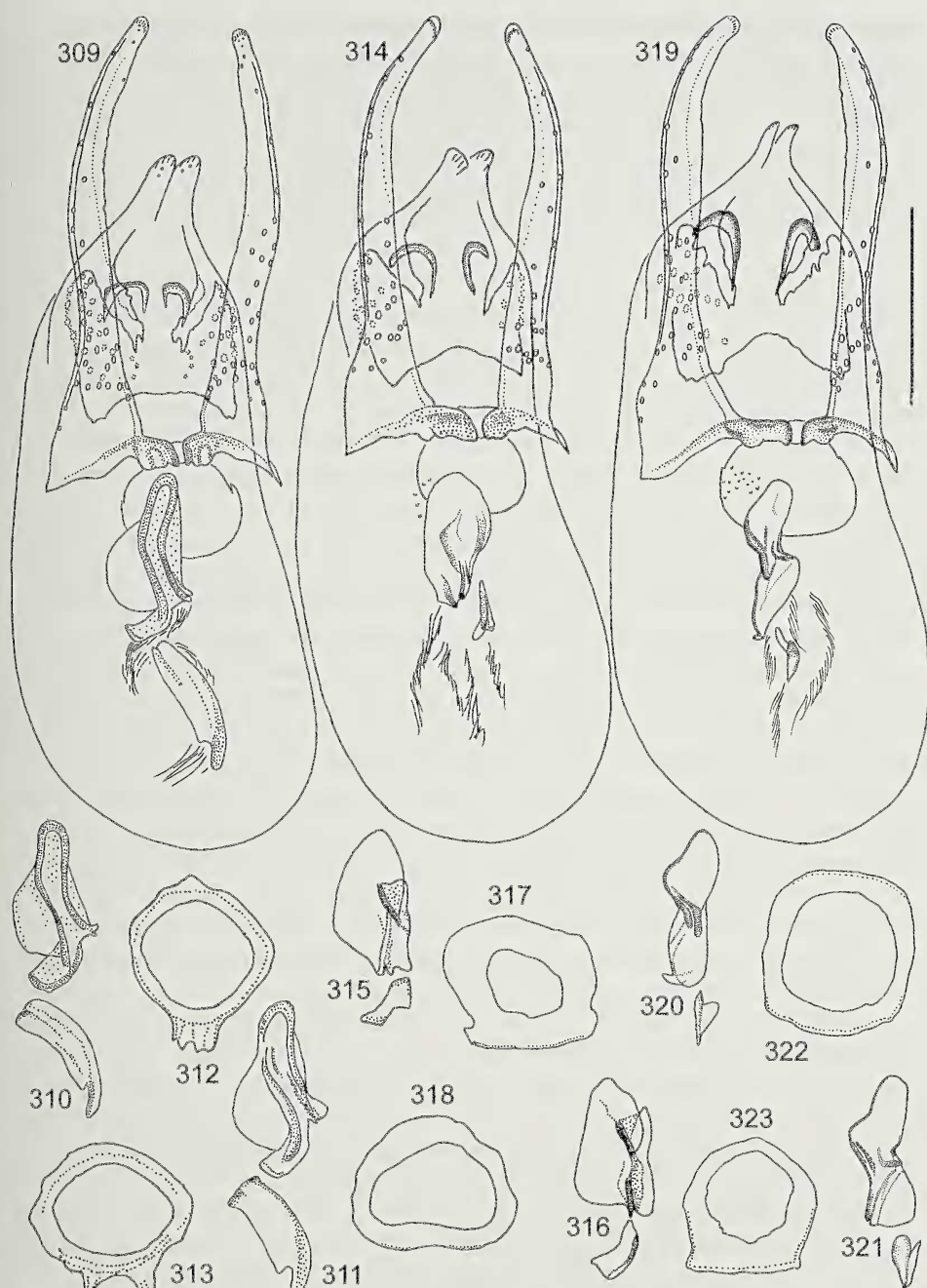
BIONOMICS: Specimens were collected most frequently in *Picea*, *Populus*, *Betula* forest, wet leaf litter (e.g. at spring), dead wood & moss sifted. Found on muddy and gravelly banks of larger streams, but also in sand and under stones, in sprayed moss on rocks at waterfall, flood debris (like floating branches), wet leaf litter (e.g. *Populus*) at stream; in *Sphagnum* moss at water's edge. Interesting bionomical notes from A. Smetana (South March, 16.V.1969): swampy meadows, flooded after long rains; treading small islands of vegetation above water level. Some specimens were captured in flight; even found on carrion once.

***Ochtheophilus gusarovi* sp. nov.**

Figs 259, 286-290, 328-329, 545, 576

TYPE MATERIAL: HOLOTYPE (♂): "CHINA: W-Sichuan, Ya'an Prefecture, Tianquan Co., E Erlang Shan pass, 29°52.36'N, 102°17.82'E, 2900m, 20.VI.1999, leg. A. Pütz" (SDEI). – PARATYPES (24): same data as holotype (coll. Pütz, 1♂, 3, ZMUN, 1♂, HNHM, 1♀). – "Ya'an Prefecture, Tianquan Co., E Erlang Shan pass, 9km SE Luding, 29°52'N, 102°18'E, 2900m, 20.VI.1999, leg. M. Schülke, Bachufer, Moos + Schotter" (coll. Schülke, 2♂, 6, ZMHB, 1♂, 1♀, MHNG, 1♂, 1♀, NHMW, 1♂, 1♀, ZMUN, 1♀, HNHM, 1♂, 1♀). – "CHINA: Sichuan, Gongga Shan, Hailuoguo, above Camp 3, 3000m, 29°35' N, 102°00' E, 6.VII.1996, leg. A. Smetana, J. Farkač & P. Kabátek (C53), [sifting of accumulated leaf litter, various debris and moss on small sandy beaches of a small creek]" (coll. Smetana, 1♂).

DESCRIPTION: Forebody as in Fig. 545. Measurements (n=10): HW = 0.57 (0.55-0.59); TW = 0.505 (0.48-0.52); PW = 0.625 (0.58-0.66); SW = 0.80 (0.76-0.84); AW = 0.83 (0.76-0.90); HL = 0.43 (0.41-0.44); EL = 0.19 (0.17-0.20); TL = 0.08 (0.07-0.09); PL = 0.50 (0.47-0.53); SL = 0.98 (0.94-1.04); SC = 0.89 (0.86-0.94); FB = 1.95 (1.88-2.04); BL = 3.54 (3.30-3.76) mm. Head, pronotum and abdomen blackish dark brown. Elytra medium brown, sometimes ochre, except scutellar area to shoulders and a broad transversal stripe at apex dark brown (the expression of the lighter elytra



FIGS 309-323

(309-313) *Ochtheophilus andalusiacus* (Fagel); aedeagus (309), inner sclerites (310-311), female ringstructures (312-313). (314-318) *O. ashei* sp. n.; aedeagus (314), inner sclerites (315-316), female ringstructures (317-318). (319-323) *O. nitidus* (Cameron); aedeagus (319), inner sclerites (320-321), female ringstructures (322-323). Scale bar = 0.055 mm for 312-313, 317-318, 0.06 mm for 322-323, 0.1 mm for 309-311, 314-316, 319-321.

varies, but the apical stripe always darker). Mouthparts and antennae dark brown, legs medium to dark brown, tarsi and both ends of tibiae lighter, medium brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 576, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transverse line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transverse groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 259) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X strongly modified, in males as in Fig. 328, in females as in Fig. 329. Aedeagus as in Fig. 286, inner sclerites as in Figs 287-288. Female ringstructures as in Figs 289-290.

ETYMOLOGY: Named after Dr. Vladimir I. Gusarov (now Oslo, Norway but originating from St. Petersburg, Russia) who was clearly a mentor in my early years as PhD student in Kansas, in fact I learned much of the trade from him.

COMPARATIVE NOTES: A sibling species of *O. qingyianus*, (separation from it see in the key) but with much lighter elytra. These two species share a number of interesting features, strong and unique modification of tergite X, conspicuously longer (and strong) abdominal setation and a deep mid-vertex puncture.

DISTRIBUTION: Currently only known from the Chinese province of Sichuan.

BIONOMICS: Specimens were collected from sifting of leafpacks, various debris and moss on streambanks.

Ochtheophilus incognitus sp. nov.

Figs 227, 252-253, 369-373, 392, 537

TYPE MATERIAL: HOLOTYPE (♂): "USA: ARKANSAS: Johnson Co., 27.6km NE Clarksville, Ozark National Forest, Big Piney Creek, FR1802 35°37.37' N 93°12.88' W, 250m, creek bank, under stones and in sand, 18.III.2000, leg. V. I. Gusarov" (ZMUN). – PARATYPES (25): "Newton Co., Buffalo River, Highway 74 near Ponca [*+36.02/-93.36*], 25.III.1972, leg. R. W. Baumann" (USNM, 20, CASC, 1 ♀, MHNG, 1 ♂, NHMW, 1 ♂, CNCI, 1 ♂, HNHM, 1 ♂).

DESCRIPTION: Forebody as in Fig. 537. Measurements (n=10): HW = 0.52 (0.50-0.53); TW = 0.47 (0.45-0.48); PW = 0.57 (0.52-0.59); SW = 0.71 (0.67-0.74); AW = 0.72 (0.68-0.76); HL = 0.37 (0.38-0.41); EL = 0.17 (0.16-0.18); TL = 0.08 (0.07-0.09); PL = 0.44 (0.42-0.45); SL = 0.88 (0.84-0.92); SC = 0.80 (0.78-0.84); FB = 1.75 (1.66-1.90); BL = 3.10 (2.72-3.36) mm. Head, pronotum and abdomen blackish dark brown with slight reddish tint, head sometimes even darker, but elytra conspicuously light, reddish medium brown, scutellar area (variously broadly) darker, somewhat blackish. Legs medium brown, antennae and mouthparts dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 227, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus (Fig. 252) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by an impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by longitudinal impressions. Vertex with two deeper impressions with two larger, setiferous punctures in them. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 253) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very

elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, very strongly fading on all elevated parts, leaving surface predominantly shiny, on pronotum even more expressed. Punctuation on head sparse and mostly fine, average interspaces 2-3x puncture diameters, pronotal punctuation extremely fine but distinct, average interspaces 3x puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 392) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 369, inner sclerites as in Figs 370-371. Female ringstructures as in Figs 372-373.

ETYMOLOGY: The latin name of this species refers to this taxon remaining unrecognized among similar congeners for a long time.

COMPARATIVE NOTES: This is an unusually light coloured species in the *O. omalinus* group, and by this distinguishes it from all other (possibly co-occurring) group mates in the region, besides different genital structures.

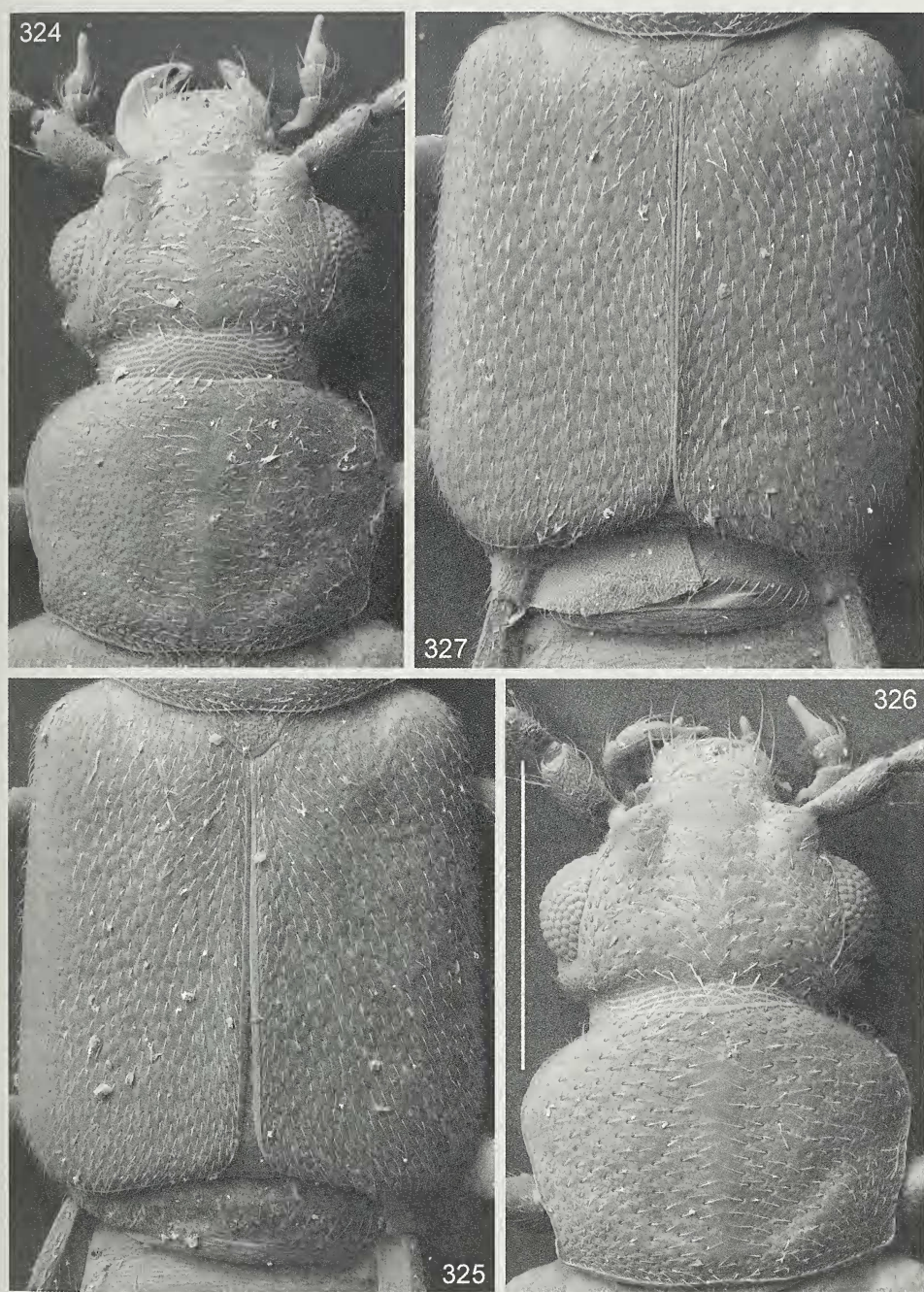
DISTRIBUTION: Currently only known the Ozarks in the USA, very likely endemic to this area.

BIONOMICS: Specimens were collected from under stones and in sand on streambank.

***Ochtheophilus kirschenblatti* sp. nov.** Figs 14, 261-266, 277-278, 349, 354, 359, 383, 536

TYPE MATERIAL: HOLOTYPE (♂): "CHINA: XINJIANG: SW slope of Borohoro, 40km ENE Qingshuihezi, 2000-3000m [*+44.40/+81.20*], 24-26.VII.1993, leg. J. Turna" (NHMW). – PARATYPES (5): same data as holotype (NHMW, 1), "[QINGHAI:] Бассейн Голубой реки [valley of "Golubaja reka" (= "Yellow River" = Huang He)], начало [= beginning of] VIII. 1900, долина озера Рхомбо-Мцо [basin of lake "Rkhombo-Mtso" (= "Ngombo Tso"? = Qinghai lake?)], 13400' [= cca 4100 m a.s.l.], leg. [P.K.] Kozlov" (ZISP, 2♂ 1♀, MHNG, 1♂).

DESCRIPTION: Forebody as in Fig. 536. Measurements (n=6): HW = 0.52 (0.50-0.53); TW = 0.49 (0.47-0.51); PW = 0.61 (0.59-0.62); SW = 0.65 (0.64-0.67); AW = 0.74 (0.70-0.78); HL = 0.40 (0.38-0.41); EL = 0.15 (0.14-0.15); TL = 0.10 (0.10-0.11); PL = 0.49 (0.48-0.51); SL = 0.74 (0.70-0.79); SC = 0.68 (0.64-0.72); FB = 1.71 (1.64-1.84); BL = 3.18 (3.00-3.49) mm. Head and abdomen blackish dark brown, pronotum reddish dark brown, sometimes lighter, almost medium brown. Elytra reddish medium brown as well as legs, mouthparts and antennae; rarely elytra quite reddish. Body with greasy lustre mostly due to elytral setation plus forebody punctuation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly



FIGS 324-327

(324-325) *Ochtkephilus nepalensis* (Scheerpeltz); head and pronotum (324), elytra (325).
(326-327) *O. enigmaticus* sp. n.; head and pronotum (326), elytra (327). All SEM, dorsal views.
Scale bar = 0.5 mm for 324, 326-327, 0.57 mm for 325.

spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 383, antennomere 6 (Fig. 354) shorter and less wide than neighbours (articles 5 and 7). Clypeus (Fig. 277) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 349) rather bulging, evenly curved, little longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 278) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 261) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge (Fig. 359) with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 262, inner sclerites as in Figs 263-264. Female ringstructures as in Figs 265-266.

ETYMOLOGY: The species is named after Jakov D. Kirschenblatt who first recognized this new species under the name 'alticola' (unpublished). Being aware of the different spellings required by modern transcription rules, when naming the species after him I deliberately follow the one that Kirschenblatt himself used on his labels and in his writings.

COMPARATIVE NOTES: A small species; very much unlike other members of the *O. omalinus* group with relatively small eyes and large temples.

DISTRIBUTION: Currently only known from China (around the Plateau of Tibet and the Dzhungarian Basin).

BIONOMICS: No bionomical data of any kind are recorded for the few known specimens, but it is probable that they were collected on bank of water.

Ochtheophilus nepalensis (Scheerpeltz, 1976) Figs 15, 324-325, 352, 357, 380, 386, 391, 395-399, 548

Ancyrophorus (s.str.) *nepalensis* Scheerpeltz, 1976: 17, 20.

Ochtheophilus nepalensis (Scheerpeltz). – Herman, 2001: 1724.

TYPE MATERIAL EXAMINED: *Ancyrophorus nepalensis* – HOLOTYPE (♀): “NEPAL, Mt.-Everest-Gebiet, Imja Khola und ufer, nahe Yaral (Pangpoche), ca. 3900m [$+27.85/+86.80^*$], 31.V.1961, leg. Dr. H. Janetschek” (IZUI).

OTHER MATERIAL: **INDIA:** Uttarakhand, 10km NE Govind Ghat [Gobindghat] (road to Ghangaria), Bhuinder Ganga river [30.687° N, 079.589° E], 11-12.VI.2011, leg. A. Shavrin, under large stones near the river (MHNG, 1). – Sikkim: Ratong Chu, 10.000ft $+27.46/+88.15^*$, 12.V.1934, leg. H.G. Champion, coll. Champion, BMNH (1♂). – Kashmir, Gulmarg $+34.05/+74.38^*$, VI-VII.1931; leg. M. Cameron, coll. Cameron, BMNH (3). – Kashmir, Hemis $+33.91/+77.71^*$, VI. 1981, leg. G. de Rougemont, coll. Rougemont, OXUM (5), USNM (1♂), HNHM (1♀). – Kashmir, Lianmarg, 10000ft $+33.91/+74.51^*$, VI-VII.1931, leg. M. Cameron, coll. Cameron, BMNH (1♀). – Ladakh, Mulbekh $+34.38/+76.37^*$ - FatuLa $+34.31/+76.83^*$, 3050-3800m, 20.VII.1976, leg. W. Wittmer, NHMB (1). — **NEPAL:** Annapurna Region, unterh. [below] Annapurna Base Camp, 3800-4000m [$28^{\circ}32'N$, $83^{\circ}54'E$], 14.VI.2000, leg. J. Schmidt [in the gravel of banks of the upper Modi Khola river, collected by hand]” (MHNG, 1♂, HNHM, 1♂). – westl. Dhaulagiri, Thankur nördl. Dhorpatan, 3600-3900m $+28.51/+83.06^*$ (C14870), 24.V.1973, leg. J. Martens, SMFD (1). — **CHINA:** W-SICHUAN: Ya'an Prefecture, Tianquan Co., E Erlang Shan pass, $29^{\circ}52.36'N$, $102^{\circ}17.82'E$, 2900m, 20.VI.1999, leg. A. Pütz, coll. Pütz, 5, HNHM 1♂. – “Ya'an Prefecture, Tianquan Co., E Erlang Shan pass, 2900m, 9km SE Luding, $29^{\circ}52'N$, $102^{\circ}18'E$, 20.VI.1999, leg. M. Schülke, Bachufer, Moos + Schotter” (coll. Schülke, 20, ZMHB, 1, BMNH, 1, MNHP, 1, ISNB, 1, CNCI, 1, USNM, 1, AMNH, 1, SEMC, 1, MHNG, 1, NKME, 1♂, NHMW, 1, SMNS, 1, FMNH, 1, coll. Assing, 1, HNHM, 3♂, 3♀).

REDESCRIPTION: Forebody as in Fig. 548. Measurements (n=10): HW = 0.51 (0.48-0.56); TW = 0.46 (0.43-0.49); PW = 0.57 (0.54-0.62); SW = 0.72 (0.66-0.78); AW = 0.75 (0.70-0.82); HL = 0.40 (0.37-0.43); EL = 0.17 (0.16-0.19); TL = 0.08 (0.07-0.09); PL = 0.45 (0.42-0.48); SL = 0.92 (0.83-1.00); SC = 0.84 (0.74-0.91); FB = 1.83 (1.77-1.97); BL = 3.26 (2.89-3.48) mm. Whole body blackish dark brown, antennae and mouthparts dark brown, often even blackish. Elytra blackish dark brown, but occasionally lighter with reddish tint. Legs mostly dark brown but tarsi and both ends of tibiae slightly lighter, somewhat reddish. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 380, antennomere 6 (Fig. 357) shorter and less wide than neighbours (articles 5 and 7). Clypeus (Fig. 324) sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by

impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 352) bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 325) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin (Fig. 386) with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 391) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 374, inner sclerites as in Figs 375-376. Female ringstructures as in Figs 377-378.

COMPARATIVE NOTES: From other members of the *O. omalinus* group can be separated by the inner sclerites of the aedeagus: the secondary sclerite is so large that it almost reaches the size of the primary sclerite; in most other related species much smaller, except in *O. andalusiacus*. The specimens in the main range of the Himalaya have much more slender/elongate antennae compared to the ones from China, but male genitalia are identical.

DISTRIBUTION: The species is so far known from the High Himalayas (from Kashmir through Nepal and North India to Sikkim) and the Chinese province of Sichuan.

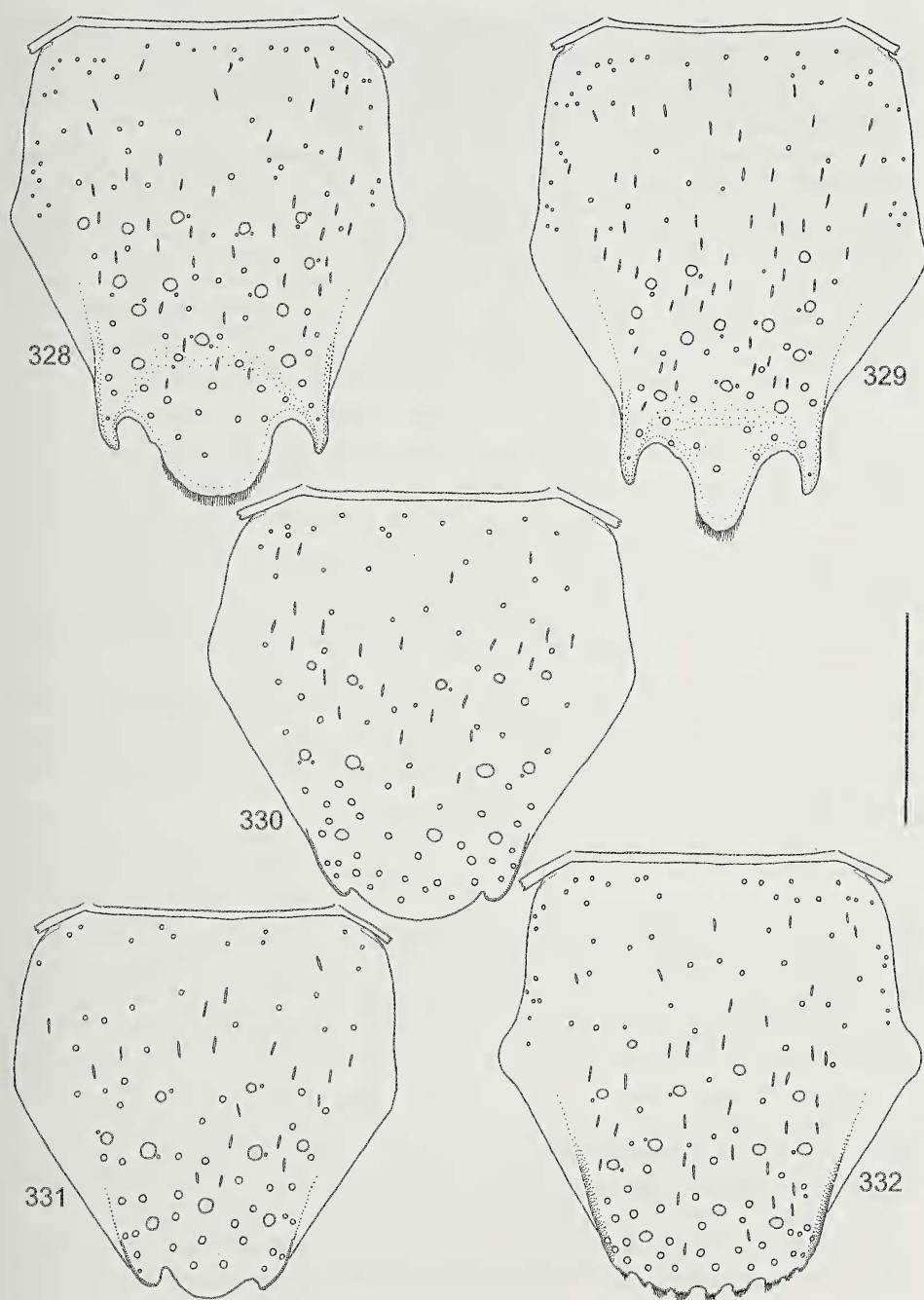
BIONOMICS: Specimens were collected from gravelbank of a river and from under large stones at a mountain river.

Ochtheophilus nitidus (Cameron, 1924)

Figs 319-323, 389, 547, 577

Ancyrophorus nitidus Cameron, 1924: 175. – Cameron, 1930: 178. – Scheerpeltz, 1976: 20.

Ochtheophilus nitidus (Cameron). – Herman, 1970: 384.



FIGS 328-332

Tergites X; *Ochtheophilus gusarovi* sp. n., ♂ (328), same, ♀ (329), *O. venustus* (Rosenhauer), ♂ (330), same, ♀ (331), *O. andalusiacus* (Fagel), ♂ (332). Scale bar = 0.1 mm for 330-331, 0.115 mm for 328-329, 332.

TYPE MATERIAL EXAMINED: *Ancyrophorus nitidus* – LECTOTYPE (here designated): “Type; H.T. [red margined round disc, curator label] \ Gahan 7000' [*+31.26/+77.53*]; Simla Hills.; Dr. Cameron.; IX. 1921. \ *Ancyrophorus*; *nitidus* Cam. \ M. Cameron.; Bequest.; B.M. 1955-147.; \ Lectotypus; *Ancyrophorus*; *nitidus* Cameron; (on the back) des. Makranczy, 1999 \ *Ochtheophilus*; *nitidus* Cameron; det. Makranczy, 1999” (BMNH).

OTHER MATERIAL: **PAKISTAN**: North-West Frontier province, Hazara, Upper Kagan Valley, Naddi [Bangla], 8000ft *+34.64/+73.33*, 11.VI.1927, leg. H.G. Champion, coll. Champion, BMNH (4) INDIA: Kashmir, Gulmarg *+34.05/+74.38*, VI-VII.1931, leg. M. Cameron, BMNH (43), HNHM (3♂, 2♀), NHMW (2), MHNG (1♂). – Kashmir, Khelanmarg, 10000ft *+34.05/+74.35*, VI-VII.1931, leg. M. Cameron, BMNH (1♀). – Punjab, [village] Jibhi, [inner] Seraj [region of district Kullu], 6000ft *+34.05/+74.35*, V.1926, leg. H.G. Champion, coll. Champion, BMNH (1♀). – Ghum district [Ghoom, Darjeeling district] *+27.02/+88.16*, V-VI.1931, leg. M. Cameron, coll. Last, MMUE (5). – **NEPAL**: [Western region, Dhawalagiri.] Himalaya, Dhawalagiri, Region Parbat, Chitre, 2500m [28°25'01"N, 83°41'52"E, sifted wet mosses], 26.V.2004, leg. A. Kleeberg (coll. Kleeberg, 1♀).

REDESCRIPTION: Forebody as in Fig. 547. Measurements (n=10): HW = 0.53 (0.51-0.55); TW = 0.49 (0.46-0.51); PW = 0.58 (0.55-0.61); SW = 0.75 (0.71-0.80); AW = 0.79 (0.76-0.86); HL = 0.40 (0.38-0.41); EL = 0.17 (0.16-0.18); TL = 0.09 (0.08-0.09); PL = 0.46 (0.44-0.49); SL = 0.93 (0.90-0.96); SC = 0.85 (0.83-0.88); FB = 1.86 (1.79-1.93); BL = 3.43 (3.07-3.76) mm. Body dark brown, head and pronotum sometimes darker, blackish. Antennae, mouthparts and legs also dark brown, blackish. Body with above average lustre mostly due to short elytral setation and sparse forebody punctation with large, smoother interspaces. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdomen with long but rather sparse setae. Head and pronotum with sparser than average setae (also stronger than usual). Head anterior eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 577, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus almost impunctate (microsculpture fading colliculate), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 insignificantly concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pro-

notum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 389) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 319, inner sclerites as in Figs 320-321. Female ringstructures as in Figs 322-323.

COMPARATIVE NOTES: This species stands out by its shinier head and pronotum (with faded microsculpture between scattered punctures) and thereby can be distinguished from the other members of the *O. omalinus* group in the region.

DISTRIBUTION: The species is so far known from Kashmir, N-India and Nepal.

BIONOMICS: Very little bionomical data exist for this apparently frequent species, some specimens were sifted from wet mosses.

***Ochtheophilus omalinus* (Erichson, 1840)** Figs 34, 257, 267-271, 283-284, 541, 580

Trogophloeus omalinus Erichson, 1840: 802. – Fairmaire & Laboulbène, 1856: 614.

Ancyrophorus omalinus (Erichson). – Kraatz, 1857: 889. – Ganglbauer, 1895: 669. – Jarrige, 1949: 60. – Scheerpeltz, 1950: 60. – Palm, 1961: 11. – Smetana, 1967: 384, 388.

Ochtheophilus omalinus (Erichson). – Herman, 1970: 384. – Pope, 1977: 24. – Lohse & Lucht, 1989: 130. – Gildenkov, 2000a: 1187. – Gildenkov, 2000b: 849. – Makranczy, 2001: 180. – Lott, 2008: 18.

Ancyrophorus parvulus Eppelsheim, 1878: 124.

TYPE MATERIAL EXAMINED: *Trogophloeus omalinus* – LECTOTYPE (♀, here designated): “6734 \ Tr.; omalinus; Er.; Saxon. Märk. ... \ Hist.-Coll. (Coleoptera); Nr. 6734 (1. ex); *Trogophloeus omalinus* Er.; Saxon. Märk.; Zool. Mus. Berlin; \ Lectotypus; *Trogophloeus omalinus* Erichson; [on the back] des. Makranczy, 1999 \ *Ochtheophilus omalinus* Erichson; det. Makranczy, 1999” (ZMHB). *Ancyrophorus parvulus* – HOLOTYPE (♂): “[Georgia,] Kaukas.[us], [auch] Zalka [gennant], 5000’ [Chram *+41.58/+44.01*], leg. Leder” (coll. Eppelsheim, NHMW).

OTHER MATERIAL: see Appendix.

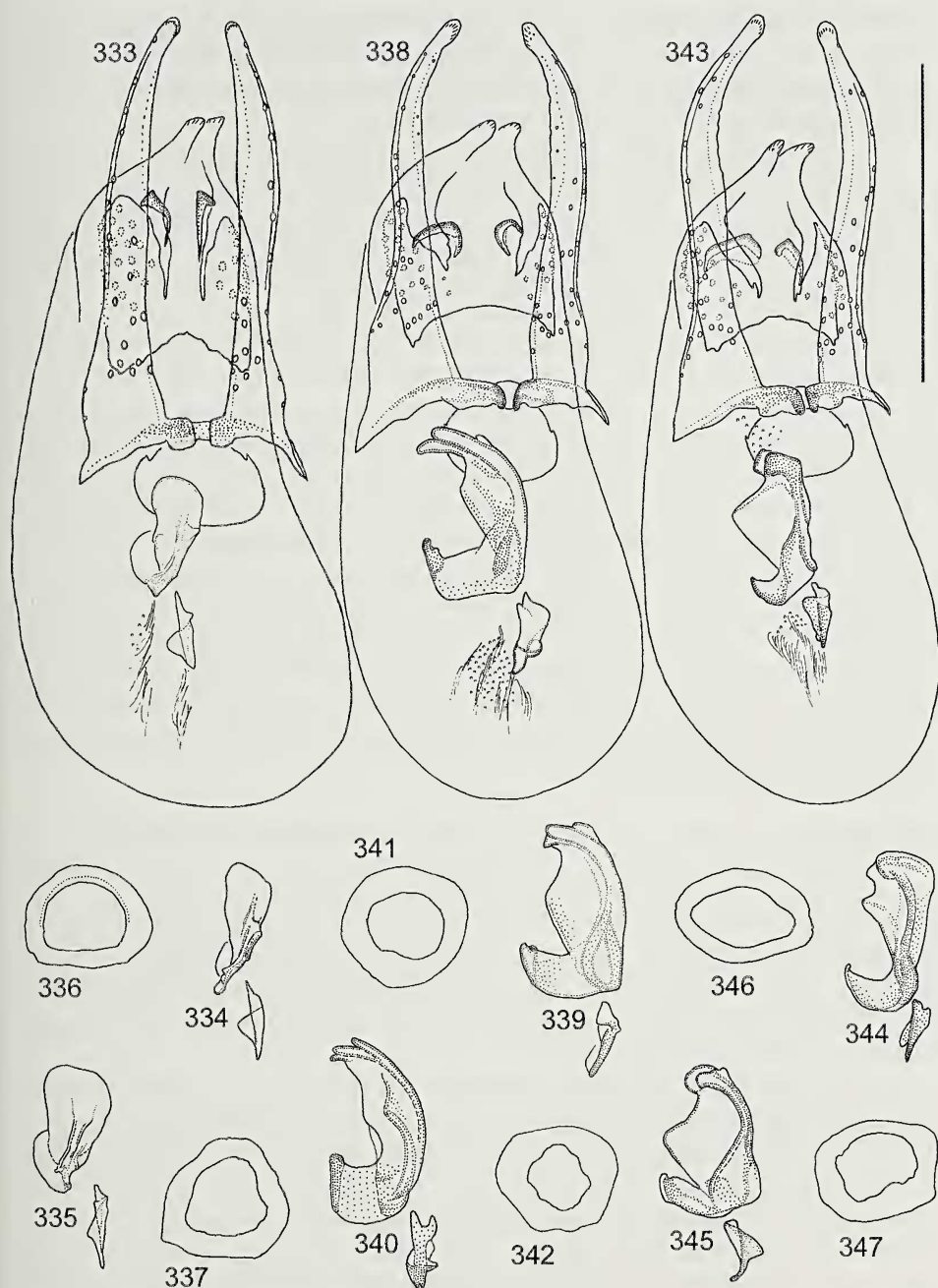
REDESCRIPTION: Forebody as in Fig. 541. Measurements (n=10): HW = 0.54 (0.52-0.56); TW = 0.48 (0.46-0.51); PW = 0.59 (0.54-0.63); SW = 0.73 (0.67-0.77); AW = 0.80 (0.72-0.88); HL = 0.40 (0.38-0.42); EL = 0.19 (0.18-0.21); TL = 0.06 (0.05-0.07); PL = 0.46 (0.44-0.49); SL = 0.96 (0.89-1.02); SC = 0.88 (0.81-0.94); FB = 1.86 (1.74-1.97); BL = 3.23 (3.09-3.38) mm. Head, pronotum and abdomen blackish dark brown. Elytra reddish dark to medium brown, scutellar area to shoulders darker, blackish; occasional specimens with lighter elytra, even with lighter spot behind middle of suture. Antennae and mouthparts dark brown with occasional reddish tint, legs reddish medium to dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and

moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriorly eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with a few slightly longer setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 580, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by an impressed transversal line (frontoclypeal suture). Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with two impressions in middle with setigerous pores. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 very gently concave/-bisinuate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 257) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between, slight incision in middle. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X strongly modified, in males as in Fig. 283, in females as in Fig. 284. Aedeagus as in Fig. 267, inner sclerites as in Figs 268-269. Female ringstructures as in Figs 270-271.

COMPARATIVE NOTES: The unique formation of the apex of tergite X distinguishes this taxon from all the similar species except *O. szeli*, to which it is very closely related. Based on the very limited and old material the latter taxon seems distinct; the aedeagus and its inner sclerite are remarkably different as also the formation of the apical opening processes (details in the key). Separation from *O. andalusiacus* and *O. venustulus* (none of which has deeply incised apex of tergite X in both sexes) is



FIGS 333-347

(333-337) *Ochtheophilus schuelkei* sp. n.; aedeagus (333), inner sclerites (334-335), female ringstructures (336-337). (338-342) *O. forticornis* (Hochhuth); aedeagus (338), inner sclerites (339-340), female ringstructures (341-342). (343-347) *O. strandi* (Scheerpeltz); aedeagus (343), inner sclerites (344-345), female ringstructures (346-347). Scale bar = 0.05 mm for 336-337, 341-342, 346-347, 0.1 mm for 333-335, 338-340, 343-345.

explained under the respective species; some confusion with the similarly sized *O. angustior* is possible, but the antenna of the latter has article 6 similar to the neighbours, its temple more broadly rounded and longer, plus the acute (narrowly rounded) apex of tergite X provides good separation for females.

NOTE: Two syntypes of *Trogophloeus omalinus* were studied, these were originally attached to the same pin (No. 6734). Specimen No. 1 is from 'Saxonia'. It is a female and a characteristic *O. omalinus* in the current sense. Specimen No. 2 is from 'Anglia', a male *O. angustior*. The former female (from 'Saxonia') is chosen as lectotype, in order to conserve the current usage of the name.

DISTRIBUTION: From North Africa (Morocco) through almost the whole of Europe (including the British Isles) to Turkey and the Caucasus.

BIONOMICS: One of the two most common species in Europe – the other is *O. praepositus* that lives in more mountainous areas, typically in mountain streams. It is mostly found at lower elevations, larger, slower rivers, more muddy spots. Collected in a very wide range of situations, but most frequently (and in the highest numbers) found in vegetable debris embedded in finer wet sand on bank, often covered by a thin layer of clay. Flood debris is also where this species can be encountered in enormous numbers: Lothar Zerche (pers. comm.) counted 3313 specimens of *O. omalinus* in flood debris after a thunderstorm at Wechselburg. Frequent among dead grasses on banks, and various (still wet) vegetable debris, like tree-branches, decomposed wood, between stones. Unusual for this species, but found also in soaked willow moss (*Fontinalis* sp.) at smaller river in forest. Also collected by treading mud and by carnet. Occurs at seashores also.

***Ochtheophilus qingyianus* sp. nov.** Figs 260, 296-299, 305-306, 351, 356, 379, 384, 387

TYPE MATERIAL: HOLOTYPE (♂): “**NEPAL:** Annapurna Region, unterh. [below] Annapurna Base Camp, 3800-4000m [28°32'N, 83°54'E], 14.VI.2000, leg. J. Schmidt [in the gravel of banks of the upper Modi Khola river, collected by hand]” (MHNG). – PARATYPES (3): same data as holotype (MHNG, 1 ♀). – “E-Nepal, Rolwaling Himal, Rolwaling Tal, Nyimare, 3300m [27°54'N, 86°22'E], 19.V.2000, leg. A. Kleeberg [cloud forest; sifting leaf litter under wood, wet mosses]” (ZMHB, 1 ♀). – “**CHINA:** SICHUAN: Bao'xing Co., Tibet Auton. Unit, Yaoji; Qing Yi river, 1750m elev., (approx. 30°33'N, 102°39'E), 16.VIII.1995, leg. R.E. Roughley” (JBWM, 1 ♂, barcode 0091584).

DESCRIPTION: Measurements (n=4): HW = 0.54 (0.52-0.56); TW = 0.48 (0.46-0.50); PW = 0.61 (0.59-0.64); SW = 0.77 (0.74-0.81); AW = 0.79 (0.75-0.84); HL = 0.41 (0.39-0.42); EL = 0.19 (0.17-0.20); TL = 0.07 (0.07-0.08); PL = 0.48 (0.41-0.46); SL = 0.95 (0.89-0.99); SC = 0.87 (0.82-0.91); FB = 1.90 (1.81-1.97); BL = 3.42 (3.21-3.59) mm. Body very dark coloured, dark brown to pitch black, occasional lighter coloured exemplars with lighter (dark brown, slightly reddish) elytra, legs and mouthparts – even these lighter specimens with dark antenna. Darker specimens with tibiae lighter on both ends. Body with greasy lustre mostly due to elytral setation plus fore-body punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and much longer setae, extremely long ones adjacent to laterosternites. Head antieriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as

pronotal margin and middle of tibiae (Fig. 379). Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 384, antennomere 6 (Fig. 356) shorter and less wide than neighbours (articles 5 and 7). Clypeus (Fig. 300) sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with three setigerous pores in middle. Temples (Fig. 351) bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 301) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum shallow, more evenly spaced, average interspaces 1.5 puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures rather discrete.

Abdomen. Compared to forebody, abdomen with more sparse but not finer punctuation (could be slightly confluent), microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin (Fig. 387) with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 260) basal edge arched (more straight laterally, more arched in middle), basal sclerotized band straight on a small distance in middle; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, sinuate in middle, rather pointed (but obtuse-angled); in females slightly more sinuate (convex) in middle. Tergite X strongly modified, in males as in Fig. 305, in females as in Fig. 306. Aedeagus as in Fig. 296, inner sclerite as in Fig. 297. Female ringstructures as in Figs 298-299.

ETYMOLOGY: Named after the Qing Yi river, the locality of the first discovered (male) specimen; two very interesting species were discovered by Harald Schillhammer, who suggested that I contact Robert E. Roughley for the five specimens he had spotted in the collection of the Manitoba University (Winnipeg). For years I was searching for proof that this male belongs to the same species as a lone female, courtesy of Andreas Kleeberg, from East Nepal; a pair of specimens from Gunnar Hirthe (who got these from Joachim Schmidt) from Central Nepal (Annapurna) finally proved it.

COMPARATIVE NOTES: See also under *O. gusarovi*, which also has a deep mid-vertex puncture, but this species is darker coloured.

DISTRIBUTION: Currently only known from Nepal and the Chinese province of Sichuan.

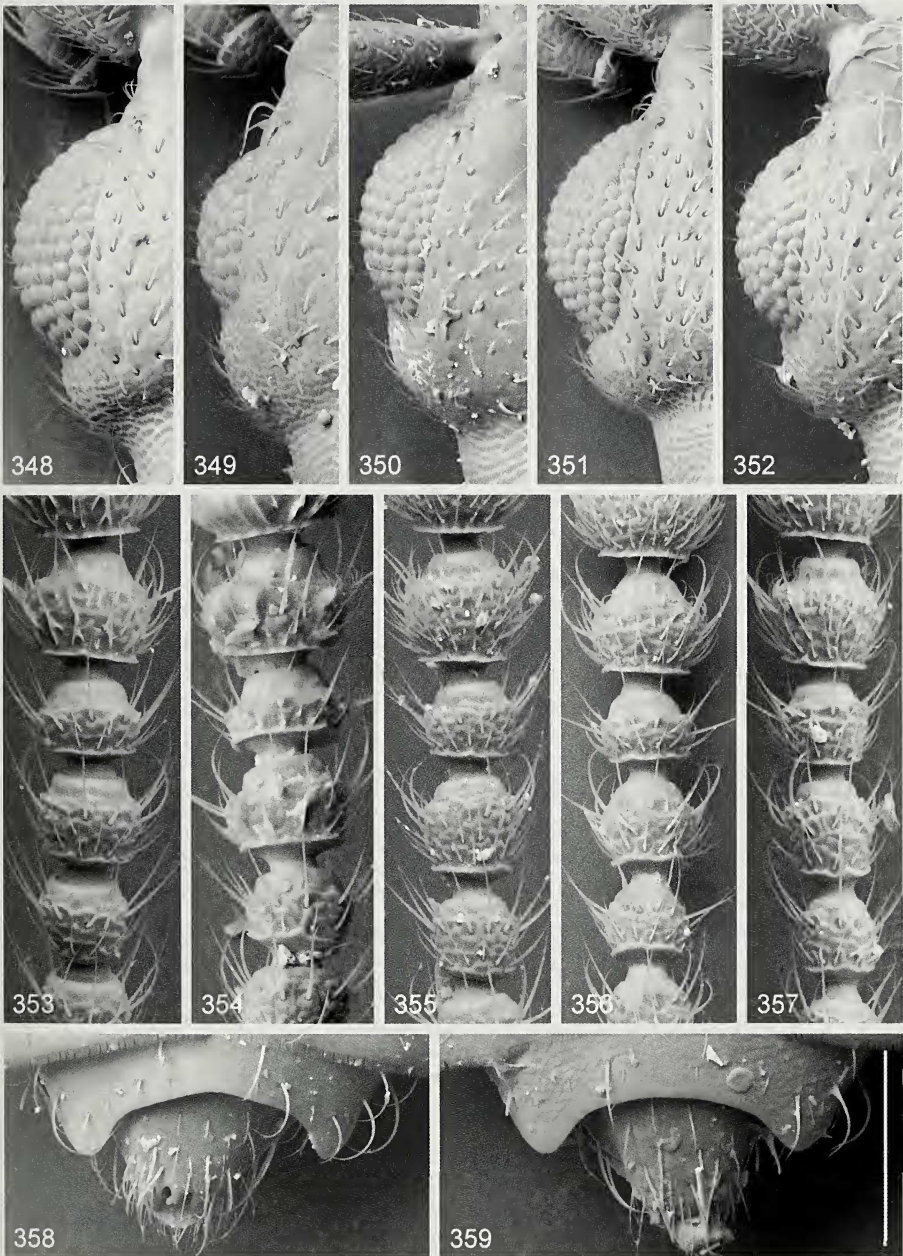
BIONOMICS: Specimens were collected from wet moss and gravelbanks of mountain rivers.

***Ochtheophilus schuelkei* sp. nov.** Figs 16, 279-280, 333-337, 350, 385, 390, 546

TYPE MATERIAL: HOLOTYPE (♂): "KYRGYZSTAN: Ala-Tau Geb., Frunze, Ala-Artscha (stream), 2500m [$+42.52/+74.48^{\circ}$], 09.VII.1984, leg. [L.] Behne, spritzmoos" (coll. Zerche, SDEI). – PARATYPES (59): same data as holotype (SDEI, 2♂, 35, FMNH, 1, CNCI, 1, NKME, 1, MNHP, 1, ISNB, 1, AMNH, 1, USNM, 1, SEMC, 1♂, SMNS, 1♂, MHNG, 1, HNHM, 1♂, 1♀, 2). – Kirgisia, Tienschan, Ala Tau, Ala Artscha, 2000m [$+42.58/+74.48^{\circ}$], 9.VII.1984, leg. D. Wrase (coll. Schülke, 1♂). – Same but 21-22.VI.1982, leg. J. Selinek (NMPC, 1). – "Киргизия, Ошск[ая] обл[асть], Арсланбоб [$+41.33/+72.93^{\circ}$], leg. Гусаров, 4.X.1989, у ручья, влажный мох [at a creek, in wet moss]" (coll. Gusarov, ZMUM, 1♂, 1♀, HNHM, 1♂). – "TAJIKISTAN: Pamir-Alai, Hissar-Mts., Warsob valley, 1800m, snowfield edge at km55 [$+38.97/+68.77^{\circ}$], 28.VI.1990, leg. M. Schülke & D. Wrase" (coll. Schülke, 1♂). – "Tads., Pamir, Muksu-Gebiet, b. Kishlak Kandou, 2800m [$+39.11/+71.65^{\circ}$], VII.1990, leg. [J.] Schmidt" (SDEI, 1).

DESCRIPTION: Forebody as in Fig. 546. Measurements (n=10): HW = 0.54 (0.51-0.57); TW = 0.50 (0.47-0.52); PW = 0.61 (0.56-0.64); SW = 0.76 (0.72-0.80); AW = 0.83 (0.75-0.86); HL = 0.43 (0.40-0.44); EL = 0.18 (0.17-0.20); TL = 0.10 (0.09-0.10); PL = 0.47 (0.45-0.50); SL = 0.96 (0.89-1.03); SC = 0.88 (0.80-0.94); FB = 1.92 (1.83-2.03); BL = 3.35 (3.03-3.63) mm. Head, pronotum, abdomen, antennae and mouthparts blackish dark brown. Elytra reddish dark brown, scutellar area to shoulders and an inconspicuous broad transversal stripe at apex darker; occasional specimens with lighter (reddish medium brown) elytra. Antennae and mouthparts dark brown with occasional reddish tint, legs reddish medium to dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctuation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to latero-sternites. Head antieriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 385, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus (Fig. 279) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 350) bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' fully formed, longitudinal midline as a



FIGS 348-359

(348-352) Head sides; *Ochtheophilus enigmaticus* sp. n. (348), *O. kirschenblatti* sp. n. (349), *O. schuelkei* sp. n. (350), *O. qingyianus* sp. n. (351), *O. nepalensis* (Scheerpeltz) (352). (353-357) Antennomeres 4-7; *O. enigmaticus* sp. n. (353), *O. kirschenblatti* sp. n. (354), *O. szeli* sp. n. (355), *O. qingyianus* sp. n. (356), *O. nepalensis* (Scheerpeltz) (357). (358-359) Abdominal apices; *O. szeli* sp. n. ♂ (358), *O. kirschenblatti* sp. n. ♀ (359). All SEM, dorsal views. Scale bar = 0.11 mm for 353, 0.12 mm for 354-355, 0.13 mm for 348, 356-357, 0.15 mm for 349-352, 0.2 mm for 358-359.

slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 280) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 390) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 333, inner sclerites as in Figs 334-335. Female ringstructures as in Figs 335-337.

ETYMOLOGY: The species is named after Michael Schülke (Berlin, Germany), coleopterist and collector who is also specializing in Oxytelinae and who provided the first insight into the difficulties of taxonomy through our early discussions on *Thinobius* – the tiniest of all oxytelines, and one of the most interesting and challenging genera, topic of our joint projects, my first taxonomic publications.

COMPARATIVE NOTES: This species is notable for its comparatively long and rather broadly curved temples; as far as other traits are concerned, similar to the members of the *O. omalinus* species group. Accurate separation only possible by the apically unsclerotized inner sclerite of the aedeagus.

DISTRIBUTION: Currently only known from Kyrgyzstan and Tajikistan.

BIONOMICS: Specimens were collected at streams from wet willow moss (*Fontinalis* sp.) and at snowmelt.

***Ochthephilus strandi* (Scheerpeltz, 1950)** Figs 35-36, 308, 343-347, 539, 579

Ancyrophorus strandi Scheerpeltz, 1950: 62, 72. – Palm, 1961: 11.*

Ochthephilus strandi (Scheerpeltz). – Herman, 1970: 385.

*later Central European interpretations of this species are erroneous

TYPE MATERIAL EXAMINED: *Ancyrophorus strandi* – LECTOTYPE (here designated): “Lakselv Po. [*+70.05/+24.93*]; A. Strand; (on the back) c 18/6-31 \ Andr. Strand, Oslo; donavit: 2.VI.1938 \ ex coll.; Scheerpeltz \ Typus; *Ancyrophorus*; strandi; O. Scheerpeltz \ Lectotypus; *Ancyrophorus*; strandi Scheerpeltz; (on the back) des. Makranczy, 1999 \ *Ochthephilus*; strandi Scheerpeltz; det. Makranczy, 1999” (NHMW). – PARALECTOTYPES (4): “Framnes m. elv. [*+68.43/+17.38*]; A. Strand; (on the back) 25/6-30 \ Andr. Strand, Oslo;

donavit: II.1931 \ ex coll.; Scheerpeltz \ Typus; Ancyrophorus; strandi; O. Scheerpeltz \ Paralectotypus; Ancyrophorus; strandi Scheerpeltz; (on the back) des. Makranczy, 1999 \ Ochthephilus; strandi Scheerpeltz; det. Makranczy, 1999" (NHMW, 1). – "Framnes m. elv.; A. Strand; (on the back) 25/6-30 \ Andr. Strand, Oslo; donavit: II.1931 \ ex coll.; Scheerpeltz \ Cotypus; Ancyrophorus; strandi; O. Scheerpeltz \ Paralectotypus; Ancyrophorus; strandi Scheerpeltz; (on the back) des. Makranczy, 1999 \ Ochthephilus; strandi Scheerpeltz; det. Makranczy, 1999" (NHMW, 1). – "Lakselv Po.; A. Strand \ Andr. Strand, Oslo; donavit: 2.VI.1938 \ ex coll.; Scheerpeltz \ Cotypus; Ancyrophorus; strandi; O. Scheerpeltz \ Paralectotypus; Ancyrophorus; strandi Scheerpeltz; (on the back) des. Makranczy, 1999 \ Ochthephilus; strandi Scheerpeltz; det. Makranczy, 1999" (NHMW, 2).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 539. Measurements (n=10): HW = 0.53 (0.50-0.56); TW = 0.47 (0.43-0.50); PW = 0.58 (0.53-0.60); SW = 0.72 (0.66-0.75); AW = 0.75 (0.68-0.82); HL = 0.39 (0.37-0.42); EL = 0.20 (0.18-0.21); TL = 0.07 (0.06-0.08); PL = 0.46 (0.43-0.51); SL = 0.93 (0.87-0.98); SC = 0.85 (0.79-0.90); FB = 1.82 (1.73-1.91); BL = 3.26 (2.83-3.43) mm. Head, pronotum and abdomen blackish dark brown. Elytra reddish dark to medium brown, scutellar area to shoulders plus a broad stripe at apex darker, blackish. Antennae and mouthparts dark brown with occasional reddish tint, legs reddish medium to dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 579, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transverse line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transverse groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 308) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 343, inner sclerites as in Figs 344-345. Female ringstructures as in Figs 346-347.

COMPARATIVE NOTES: This species is rather similar to *O. forticornis*, as evidenced by the similarity of the male genitalia and can only be separated by the differences in the apical part of the inner sclerite (details in the key). It must be remarked here that the shape of tergite VIII (as shown on Fig. 308 vs. Fig. 307) appears to be different from that of *O. forticornis*, but the latter species is so variable that this feature has no separation value at all. As a matter of fact, Fig. 307 shows a form frequently experienced in Japanese or Mongolian specimens of *O. forticornis*, just to indicate this sort of variability. Given the poor separation value of the available characters, more specimens of *O. strandi* may hide among those listed here under *O. forticornis*, females and undissected males.

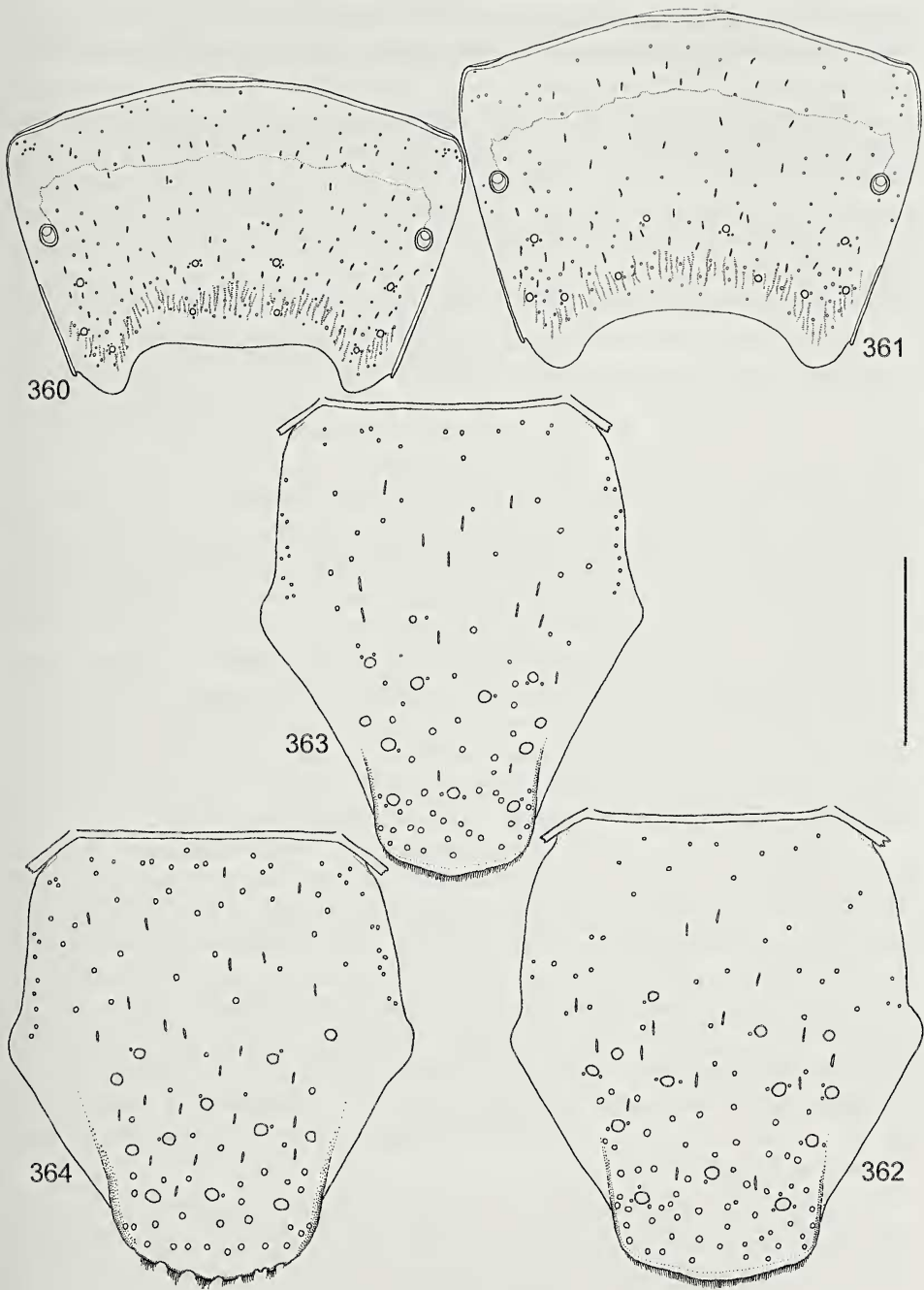
DISTRIBUTION: Known from northern Scandinavia, Lapponia, Siberia to Alaska and Canada.

BIONOMICS: Specimens were collected at sandy and peaty riverbanks, from sand and gravel, mosses, leaf litter (*Alnus* sp.), *Carex* sp. and grasses, horseweed at gravelbank, sifting of straw and needle drift at riverbank.

***Ochtheophilus szeli* sp. nov.** Figs 17, 33, 258, 272-276, 285, 302-304, 355, 358, 381, 542

TYPE MATERIAL: HOLOTYPE (♂): "[AZERBAIJAN:] Lenkoran [area, approx. 38°76'S, 48°60'E], III.1883, [leg.] Leder (Reitter)" (NHMW). – PARATYPES (5): same data as holotype (NHMW, 1 ♀, 1, MHNG, 1 ♂, 1 ♀, HNHM, 1 ♂).

DESCRIPTION: Forebody as in Fig. 542. Measurements (n=7): HW = 0.53 (0.50-0.55); TW = 0.49 (0.45-0.50); PW = 0.59 (0.55-0.62); SW = 0.72 (0.65-0.76); AW = 0.77 (0.70-0.83); HL = 0.38 (0.36-0.42); EL = 0.18 (0.17-0.20); TL = 0.065 (0.06-0.07); PL = 0.45 (0.41-0.49); SL = 0.94 (0.85-1.01); SC = 0.86 (0.78-0.93); FB = 1.83 (1.69-1.96); BL = 3.09 (2.69-3.43) mm. Head blackish dark brown, abdomen dark brown, even darker along basal ridges and occasionally at apices of tergites. Pronotum dark brown, slightly lighter than head, sometimes with slight reddish tint. Elytra reddish dark brown, if lighter, scutellar area to shoulders, broadly along suture and a transversal stripe at apex remaining darker, blackish; leaving the outer central half of elytra somewhat lighter, medium brownish. Antennae, mouthparts and legs reddish medium to dark brown. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anteriad eyes and near inner



FIGS 360-364

(360-361) Tergites VIII; *Ochtheophilus andalusiacus* (Fagel) (360), *O. ashei* sp. n. (361).
 (362-364) Tergites X; *O. ashei* sp. n., ♂ (362), same, ♀ (363), *O. andalusiacus* (Fagel), ♀ (364).
 Scale bar = 0.1 mm for 363-364, 0.2 mm for 360-361.

posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex with a few slightly longer setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 381, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus (Fig. 302) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 303) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 258) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge (Fig. 358) with sinuate (protruding) corners, and broad, moderately deep emargination in between, slight incision in middle. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X strongly modified, in males as in Fig. 285, in females as in Fig. 304. Aedeagus as in Fig. 272, inner sclerites as in Figs 273-274. Female ring-structures as in Figs 275-276.

ETYMOLOGY: Named after Dr. Győző Szél (Budapest, Hungary), who is a book collector like me and this habit and our connection got me started as a coleopterist and a researcher on Staphylinidae, mostly through an unfinished oxyteline manuscript of the late Dr. László Tóth. Every time I ventured to other fields, other groups, I am eternally thankful for having found Oxytelinae (through the aforementioned manuscript my deceased predecessor left behind).

COMPARATIVE NOTES: This is a sibling species of *O. omalinus*, and is based on very old material from a poorly collected area; can be reliably separated by the apical formation of the tergite X in both sexes.

DISTRIBUTION: Currently only known from one locality, the larger surroundings of the city Lenkorān, most likely the road to Lerik. It is, therefore, probable that the species also occurs in the northern part of Iran.

BIONOMICS: No bionomical data were recorded for these old specimens.

Ochtheophilus venustulus (Rosenhauer, 1856) Figs 256, 291-295, 330-331, 543, 582

Trogophloeus venustulus Rosenhauer, 1856: 84.

Ancyrophorus venustulus (Rosenhauer). – Kraatz, 1857: 889.

Ochtheophilus venustulus (Rosenhauer). – Mulsant & Rey, 1878: 808. – Pope, 1977: 24. – Makranczy, 2001: 180.

Ancyrophorus mediterraneus Scheerpeltz, 1950: 64, 74, **syn. nov.**

TYPE MATERIAL EXAMINED: *Ancyrophorus mediterraneus* – LECTOTYPE (here designated): “Potamo; Corfu [$+39.63/+19.88^*$], Woerz \ *omalinus* \ ex coll.; Scheerpeltz \ Typus; Ancyrophorus; mediterraneus; O. Scheerpeltz \ *venustulus*; Rosh. \ Lectotypus; Ancyrophorus; mediterraneus Scheerpeltz; (on the back) des. Makranczy, 1999 \ *Ochtheophilus*; *venustulus* Rosenhauer; det. Makranczy, 1999” (NHMW). – PARALECTOTYPES (6): “Hyères [$+43.12/+06.12^*$] \ *omalinus* \ ex coll.; Scheerpeltz \ Typus; Ancyrophorus; mediterraneus; O. Scheerpeltz \ *venustulus*; Rosh. \ Paralectotypus; Ancyrophorus; mediterraneus Scheerpeltz; (on the back) des. Makranczy, 1999 \ *Ochtheophilus*; *venustulus* Rosenhauer; det. Makranczy, 1999” (NHMW, 1). – “Hyères \ *omalinus* \ ex coll.; Scheerpeltz \ Cotypus; Ancyrophorus; mediterraneus; O. Scheerpeltz \ *venustulus*; Rosh. \ Paralectotypus; Ancyrophorus; mediterraneus Scheerpeltz; (on the back) des. Makranczy, 1999 \ *Ochtheophilus*; *venustulus* Rosenhauer; det. Makranczy, 1999” (NHMW, 1). – “Dalmatia; Castelnuovo [$+42.45/+18.53^*$]; M. Hilf. 1910; coll. O. Leonhard \ *longipennis* \ ex coll.; Leonhard \ Cotypus; Ancyrophorus; mediterraneus; O. Scheerpeltz \ *venustulus*; Rosh. \ Paralectotypus; Ancyrophorus; mediterraneus Scheerpeltz; (on the back) des. Makranczy, 1999 \ *Ochtheophilus*; *venustulus* Rosenhauer; det. Makranczy, 1999” (NHMW, 1). – “Dalm. Castelnuovo; M. Hilf 1910; coll. O. Leonhard \ *omalinus* \ ex coll.; Leonhard \ Cotypus; Ancyrophorus; mediterraneus; O. Scheerpeltz \ *venustulus*; Rosh. \ Paralectotypus; Ancyrophorus; mediterraneus Scheerpeltz; (on the back) des. Makranczy, 1999 \ *Ochtheophilus*; *venustulus* Rosenhauer; det. Makranczy, 1999” (NHMW, 1). – “Mogador [Essaouria $+31.51/-09.76^*$] \ Quedenfeldt \ *venustulus* Rosh. \ *omalinus* \ ex. coll.; Scheerpeltz \ Cotypus; Ancyrophorus; mediterraneus; O. Scheerpeltz \ *venustulus*; Rosh. \ Marokko \ Paralectotypus; Ancyrophorus; mediterraneus Scheerpeltz; (on the back) des. Makranczy, 1999 \ *Ochtheophilus*; *venustulus* Rosenhauer; det. Makranczy, 1999” (NHMW, 1). – “H. Pyren.; Argelès [$+43.00/-06.11^*$] \ *omalinus* \ ex. coll.; Scheerpeltz \ Cotypus; Ancyrophorus; mediterraneus; O. Scheerpeltz \ *venustulus*; Rosh. \ Marokko \ Paralectotypus; Ancyrophorus; mediterraneus Scheerpeltz; (on the back) des. Makranczy, 1999 \ *Ochtheophilus*; *venustulus* Rosenhauer; det. Makranczy, 1999” (NHMW).

OTHER MATERIAL: see Appendix.

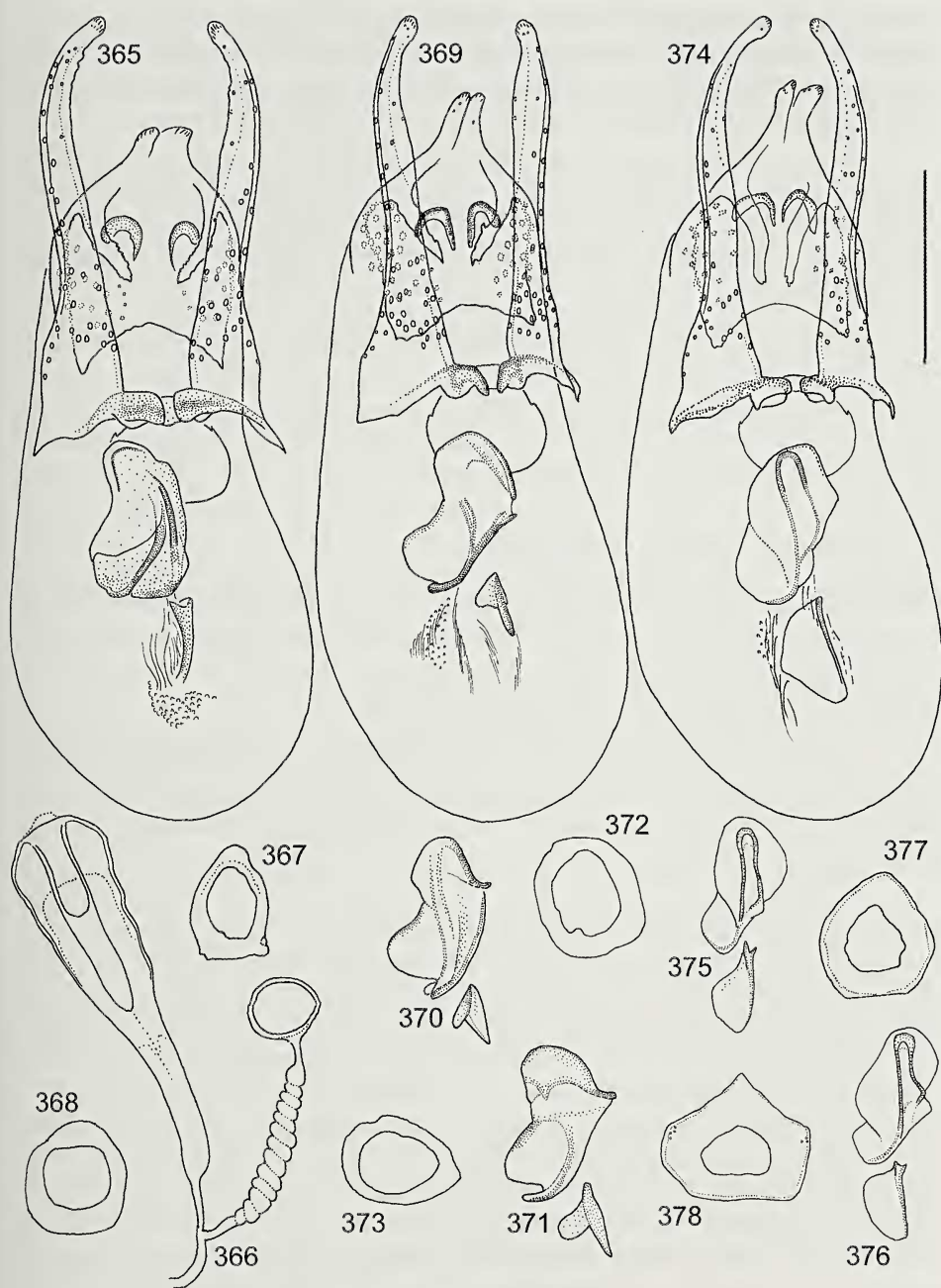
REDESCRIPTION: Forebody as in Fig. 543. Measurements (n=10): HW = 0.50 (0.48-0.53); TW = 0.46 (0.44-0.48); PW = 0.55 (0.52-0.59); SW = 0.67 (0.63-0.73); AW = 0.71 (0.64-0.81); HL = 0.38 (0.37-0.39); EL = 0.18 (0.17-0.19); TL = 0.07 (0.06-0.07); PL = 0.44 (0.42-0.47); SL = 0.88 (0.82-0.98); SC = 0.80 (0.74-0.90); FB = 1.74 (1.64-1.90); BL = 3.13 (2.97-3.30) mm. Head blackish dark brown, abdomen dark brown, often slightly reddish; at basal ridges with darker brown transversal lines. Pronotum and elytra reddish light to medium brown, elytra frequently with a conspicuous yellowish (more or less heart-shaped) spot at both sides of suture at about 3/4

length that often extends to middle of disc. Legs, mouthparts light to medium brown, antennae medium brown (sometimes darker), except basal articles lighter. Body with greasy lustre mostly due to elytral setation plus forebody punctation and microsculpture. Pubescence rather fine and moderately dense, shorter and stronger (regularly spaced) on elytra, abdominal tergites with finer and longer setae, especially adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 582, antennomere 6 shorter and less wide than neighbours (articles 5 and 7). Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transverse line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transverse groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 almost straight. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves gently convex. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head sparse, mostly confined to posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe unmodified in middle (nearly uniform breadth). Tergite VIII (Fig. 256) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and almost straight in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X strongly modified, in males as in Fig. 330, in females as in Fig. 331. Aedeagus as in Fig. 291, inner sclerites as in Figs 292-293. Female ringstructures as in Figs 294-295.

COMPARATIVE NOTES: Can be distinguished from the related *O. andalusiacus* and *O. omalinus* by the apical formation of tergite X; among the three, *O. venustulus* is the most frequent to have lighter elytra and a distinct light spot around the suture behind the middle (in the other two species specimens with similar elytra are also



FIGS 365-378

(365-368) *Ochtheophilus enigmaticus* sp. n.; aedeagus (365), spermatheca (366), female ring-structures (367-368). (369-373) *O. incognitus* sp. n.; aedeagus (369), inner sclerites (370-371), female ringstructures (372-373). (374-378) *O. nepalensis* (Scheerpeltz); aedeagus (374), inner sclerites (375-376), female ringstructures (377-378). Scale bar = 0.045 mm for 367-368, 0.075 mm for 366, 372-373, 0.1 mm for 365, 369-371, 376-378.

occasionally found). Another peculiar feature of *O. venustulus* is the formation of tergite VIII with the apical corners much less protruding (as opposed to the other two species), shallowly concave in between, almost straight (not slightly convex as in *O. andalusiacus* and without the slight incision of *O. omalinus* in centre).

NOTES: Genuine syntypic material was not found for '*Trogophloeus venustulus*'. This was not seen as a problem as even O. Scheerpeltz recognized his '*Ancyrophorus mediterraneus*' as synonymous with *venustulus* as is evident in his labelling. With the existing type material for the junior synonym no neotype designation for '*Trogophloeus venustulus*' was deemed necessary.

DISTRIBUTION: Known from North Africa, Portugal, Spain and all along the coastal areas of the Mediterranean Basin.

BIONOMICS: Specimens were collected on streambank and sandy riverbank, also from flood debris. Exemplars were gathered by the flotation method from fine gravel at the bank of a small temporary stream.

VIII. *Ochtheophilus vulgaris* species group

***Ochtheophilus championi* (Bernhauer, 1926)**

Figs 394, 398-402, 553, 587

Ancyrophorus (*Misancyrus*) *championi* Bernhauer, 1926: 21. — Cameron, 1930: 177. — Scheerpeltz, 1976: 19.

[Coiffait, 1982: 43. is a misidentification of *O. nepalensis*]

Ochtheophilus championi (Bernhauer). — Herman, 1970: 384.

TYPE MATERIAL EXAMINED: *Ancyrophorus championi* — LECTOTYPE (here designated): "[West-Almora] Ranikhet; Kumaon [*29.35/+79.42*]; H.G.C.[hampion] \ Championi; Bernh.; Typus \ Chicago NHMus; M. Bernhauer; Collection \ Lectotypus; Ancyrophorus; championi Bernhauer; [on the back] des. Makranczy, 1999 \ Ochtheophilus; championi Bernhauer; det. Makranczy, 1999" (FMNH).

OTHER MATERIAL: **INDIA:** W. Almora, Kumaon *29.35/+79.42*, leg. H.G. Champion, coll. Champion, BMNH (1). — W. Almora Division, Upper Gumti Valley *+29.78/+79.15*, IV.1919, leg. H.G. Champion, coll. Champion, BMNH (2). — **NEPAL:** [Western region, Dhawalagiri.] Himalaya, Dhawalagiri, Region Parbat, near Chitre, Ghar Khola valley, ~2400m [28°27'36"N, 83°38'06"E], 24.V.2004, leg. A. Kleeberg [sifted organic material at bank of a tributary to Ghar Khola], coll. Kleeberg (2), MHNG (1 ♂), HNHM (1 ♀). — **CHINA:** YUNNAN: Qüjing prefecture, Liangwang Shan (= King Liang Mountains), ca. 100km (on road)[80km] NNE Kunming, 25°33'14"N, 103°05'52"E, ca. 2300m, 3.XI.1999, leg. M.A. Jäch & H. Schönmann (CWBS 350), stream ca. 1-2m wide, [unshaded, shrubs] (NHMW, 1 ♂).

DESCRIPTION: Forebody as in Fig. 553. Measurements (n=5): HW = 0.67 (0.65-0.69); TW = 0.61 (0.59-0.62); PW = 0.74 (0.73-0.76); SW = 1.04 (1.02-1.07); AW = 1.06 (0.98-1.17); HL = 0.53 (0.50-0.54); EL = 0.235 (0.23-0.24); TL = 0.11 (0.10-0.12); PL = 0.60 (0.57-0.61); SL = 1.16 (1.13-1.20); SC = 1.06 (1.03-1.12); FB = 2.38 (2.34-2.44); BL = 4.57 (4.37-4.94) mm. Whole body dark brown with occasional slight reddish tint, antennae and mouthparts dark brown. Legs mostly dark brown; if lighter, tibiae (except both ends) and apices of femora darker. Body with moderate lustre due to very dense elytral setation and fine, dense punctation all over. Pubescence on elytra short but strong and rather dense (and irregularly spaced), in contrast with much less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer,

especially at apices of tergites and adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; around middle of tibiae with 2-3 darker bristles. Elytral apex with an occasional, slightly longer seta near sutural corner. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 587. Clypeus sparsely and shallowly punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples barely bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head moderately dense, more so on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII (Fig. 394) basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 398, apex of paramere (Yunnan specimen) as in Fig. 399, base of paramere (Yunnan specimen) as in Fig. 400, base of paramere (Nepal specimen) as in Fig. 401. Female ringstructure as in Fig. 402.

NOTE: The only type specimen is most likely a female (was not dissected at the time of study, 15 years ago, because its sibling species was not discovered at that point), and the females of *O. championi* and *O. nigerrimus* cannot be distinguished. The interpretation of this name, therefore, has to be taken with caution. The available material at the moment is much too small (only one very old series for *O. nigerrimus*

and a few scattered specimens for the taxon interpreted here as *O. championi*), and even more species can be involved, so this problem may require re-examination at a later point.

COMPARATIVE NOTES: From other members of the *O. vulgaris* group *O. championi* can be separated by the body setation shared with *O. nigerrimus*, but the latter species has very different, much wider parameres. Confusion could occur with *O. vulgaris* (especially if setation is worn off or covered), but it has almost unpunctured clypeus, with only stronger microsculpture than on vertex.

DISTRIBUTION: Currently only known from N-India, Nepal and the Chinese province of Sichuan.

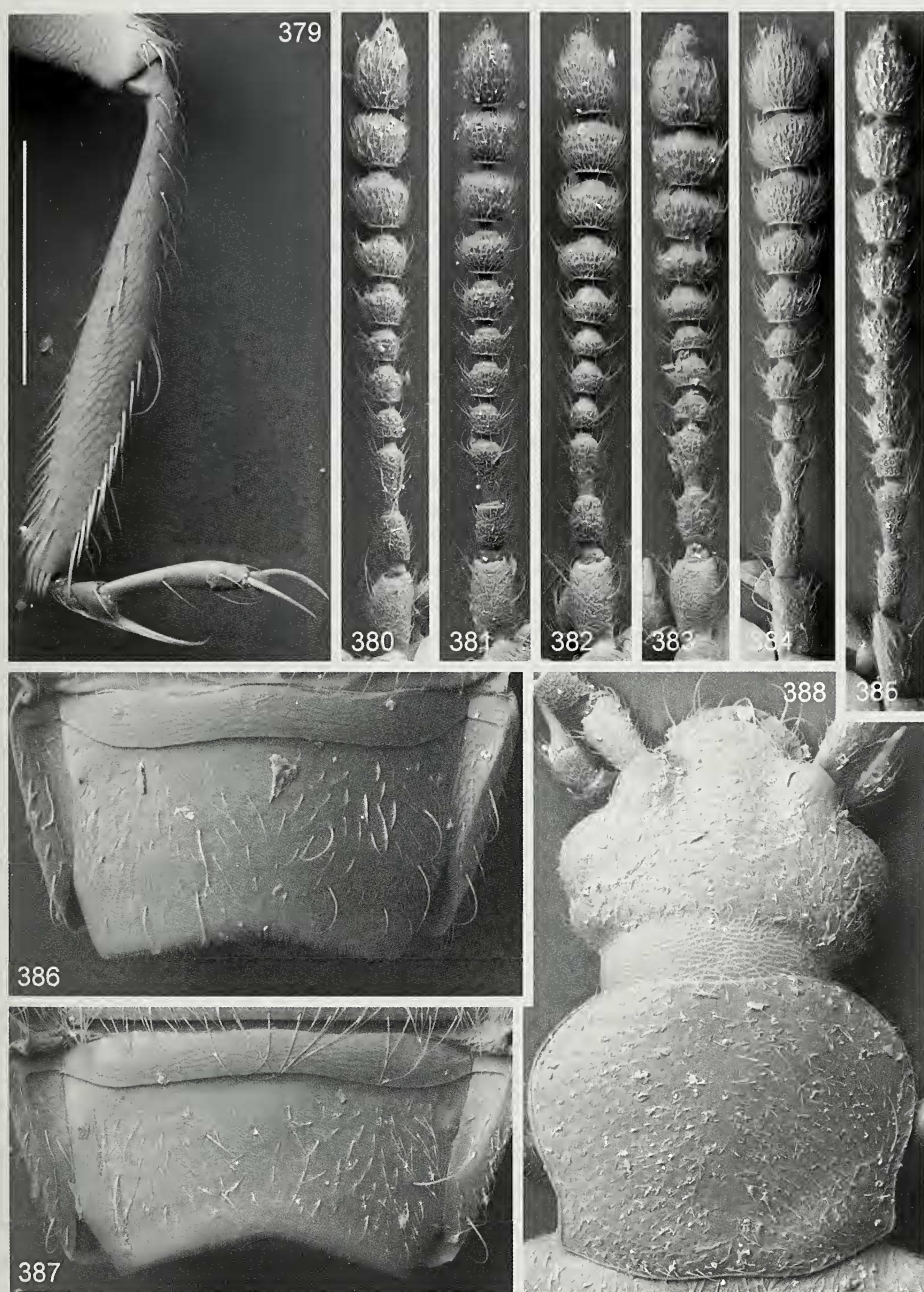
BIONOMICS: The species was collected from sifted organic material on a stream-bank. A specimen was collected by the China Water Beetle Survey (more details in their publications), apparently at a smaller stream (gravelbank) on open landscape.

***Ochtheophilus hammondi* sp. nov.**

Figs 19, 403-405, 408-410, 423-424, 549

TYPE MATERIAL: HOLOTYPE (♂): "USA: ARIZONA: Chuska Mts., Wagonwheel Campground, 2250m [$+36.05/-109.18^{\circ}$], 11-12.VII.1976., leg. P. M. Hammond, stream banks" (BMNH). – PARATYPES (12): same data as holotype (BMNH, 1). – "Chuska Mts., Apache Co., Wagonwheel Campground, 12.VII.1976, leg. J.M. Campbell" (CNCI, 1). – "UTAH: Manti-LaSal National Forest, Warner Campground, 9200' [$+39.64/-111.34^{\circ}$], 8-9.VII.1976, leg. P. M. Hammond" (BMNH, 1), "COLORADO: Delta Co., Hwy 65, 11km NW jct. For. Rd. 100, Grand Mesa N.F., 9400ft [$+39.10/-108.15^{\circ}$], 9.VII.1981, leg. J.M. Campbell" (CNCI, 1). – "Ouray Co., Box Canyon Falls, Ouray, 7800ft [$+38.02/-107.68^{\circ}$], VII.1976, leg. L. & N. Herman (1355), from moss on rocks and log near and in water" (AMNH, 3, CASC, 1♀, NHMW, 1♀). – "NEW MEXICO: Sandia Mts, Cibola N.F., Las Huertas Crk., 7000' [$+35.23/-106.41^{\circ}$], 8.VII.1969, leg. A. Smetana, cascading creek, among rotting wet wood, twigs and other debris on fine gravel benches sprinkled by cascade water" (CNCI, 1, MHNG, 1♂, HNHM, 1♀).

DESCRIPTION: Forebody as in Fig. 549. Measurements (n=10): HW = 0.66 (0.60-0.69); TW = 0.62 (0.57-0.62); PW = 0.76 (0.69-0.80); SW = 0.93 (0.83-0.98); AW = 1.10 (0.98-1.21); HL = 0.51 (0.46-0.54); EL = 0.195 (0.17-0.21); TL = 0.13 (0.12-0.15); PL = 0.63 (0.60-0.66); SL = 1.10 (0.98-1.18); SC = 1.00 (0.88-1.08); FB = 2.33 (2.07-2.46); BL = 4.11 (3.72-4.49) mm. Head blackish dark brown, pronotum and abdomen dark brown with reddish tint. Elytra reddish medium to dark brown, scutellar area to shoulders darker (blackish). Legs reddish medium to dark brown, mid-tibiae and femora often dark brown. Mouthparts and antennae reddish medium to dark brown, occasionally middle of antennae darker, slightly blackish (base and apex remaining lighter). Body with greasy lustre due to less deep punctation but dense microsculpture covering head and pronotum and microsculpture-blurred punctation on elytra. Pubescence on elytra short but strong and rather dense (regularly spaced), in contrast with much less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuously longer seta near sutural corners. Last tarsomere with a few setae only.



FIGS 379-388

(379) *Ochtheophilus qingyianus* sp. n.; metatibia and metatarsus. (380-385) Antennae; *O. nepalensis* (Scheerpeltz) (380), *O. szeli* sp. n. (381), *O. enigmaticus* sp. n. (382), *O. kirschenblatti* sp. n. (383), *O. qingyianus* sp. n. (384), *O. schuelkei* sp. n. (385). (386) *O. nepalensis* (Scheerpeltz); tergite VII. (387) *O. qingyianus* sp. n.; tergite VII. (388) *O. ketmenicus* (Kashcheev); head and pronotum. All SEM, dorsal views. Scale bar = 0.32 mm for 379, 0.35 mm for 386, 0.40 mm for 382, 384, 387, 0.45 mm for 380-381, 383, 385, 0.5 mm for 388.

Forebody. Antenna as in Fig. 424. Clypeus (Fig. 423) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 408) slightly bulging, evenly curved, little longer than half of eye length. Neck separated by a shallowly impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/4 insignificantly concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 409) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head moderately sparse, but more dense on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge (Fig. 410) with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 403. Female ringstructures as in Figs 404-405.

ETYMOLOGY: Named after Peter M. Hammond, collector of the holotype specimen. Peter was a leading figure of Staphylinidae taxonomy, taking on hugely difficult and diverse groups; eventually publishing very little of the vast amount of knowledge he accumulated through decades of his active period.

COMPARATIVE NOTES: Within its distribution range the largest species with rather large temples (and comparatively smaller eyes); in this area only *O. forticornis* is known to co-occur.

DISTRIBUTION: Currently only known from the USA, the four states that are called "Four Corners" states: Arizona, Utah, Colorado, New Mexico.

BIONOMICS: Specimens were collected on stream banks, from moss on rocks and log near and in water-cascading creek, among rotting wet wood, twigs and other debris on fine gravel benches sprinkled by cascade water.

Ochtheophilus itoi sp. nov.

Figs 416-418, 551, 567

TYPE MATERIAL: HOLOTYPE (♂): "[JAPAN,] Nara pref., Ohdaigahara [*+33.91/+135.86*], 25-26.VI.1981, [leg.] S[-I]. Naomi" (coll. Naomi, KUEC). – PARATYPES (10): "[Nara Pref.,] Dorogawa, Yamato [*+34.27/+135.88*], 3.V.1976, leg. T. Ito" (coll. Ito, 4, MHNG, 1♂, 1♀, NHMW, 1♂, HNHM, 1♂, BMNH, 1). – "Kyushu, Fukuoka, Mt. Hiko [*+33.48/+130.91*], 2.V.1971, leg. K. Takeno" (coll. Naomi, KUEC, 1♀).

DESCRIPTION: Forebody as in Fig. 551. Measurements (n=10): HW = 0.59 (0.57-0.61); TW = 0.55 (0.52-0.57); PW = 0.69 (0.67-0.72); SW = 0.83 (0.80-0.87); AW = 0.95 (0.87-1.03); HL = 0.45 (0.42-0.49); EL = 0.18 (0.17-0.19); TL = 0.12 (0.11-0.13); PL = 0.57 (0.55-0.60); SL = 1.01 (0.91-1.08); SC = 0.91 (0.81-0.97); FB = 2.10 (1.97-2.21); BL = 3.87 (3.67-4.12) mm. Head, pronotum and abdomen very dark brown with a distinct reddish tint. Elytra reddish dark brown occasionally more reddish but scutellar area to shoulders and along suture remaining darker, blackish. Mouthparts, antennae and legs reddish dark brown, tarsi and both ends of tibiae often lighter, reddish medium brown. Very rarely antennae (towards apex) lighter, more reddish medium brown. Body moderately lustrous due to not so deep punctation on head and pronotum, but distinct coriaceous microsculpture covering interspaces; comparatively longer elytral setation than in closest congeners. Pubescence on elytra short but strong and rather dense (regularly spaced), in contrast with much less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex with 2-3 slightly longer seta near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 567. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples slightly bulging, evenly curved, little longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in the posterior 2/3 bisinuate, before corner concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head shallow, more dense on posterior part and sides, on pronotum more evenly spaced, average interspaces much

larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete. Elytral apex without conspicuous setae.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 416. Female ringstructures as in Figs 417-418.

ETYMOLOGY: The species is named after Tateo Ito (Kyoto, Japan), an excellent coleopterist who provided a great wealth of material in those times when no other collection was available from Japan.

COMPARATIVE NOTES: This species, and its sibling, *O. loebli*, can be separated from co-occurring congeners (e.g. *O. vulgaris*, *O. forticornis*) by the smaller eye and larger temples; however, separation of the first two from each other can be a rather difficult task as both are quite variable externally. Smaller differences exist between the aedeagi, but the best distinguishing character is the female ringstructure that is remarkably different in the two species.

DISTRIBUTION: Currently only known from Japan, very likely endemic, known from just a few localities.

BIONOMICS: The known specimens are without any bionomical information, but from the localities it can be inferred that they were collected at streambanks.

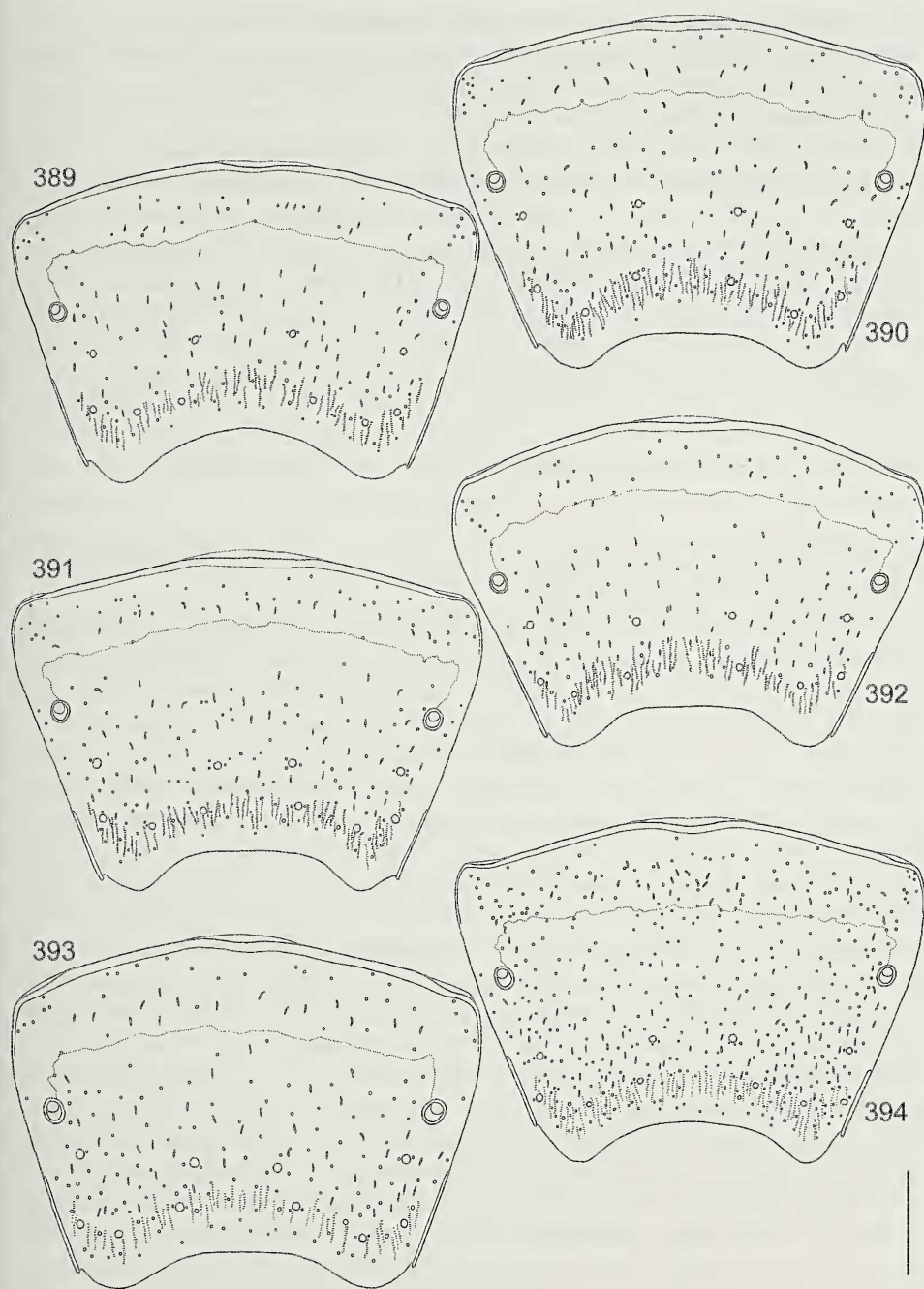
***Ochthephilus ketmenicus* (Kashcheev, 1999)** Figs 388, 411-415, 425, 550

Ancyrophorus (*s.str.*) *ketmenicus* Kashcheev, 1999: 151.

Ochthephilus ketmenicus (Kashcheev). — Herman, 2001: 1722.

TYPE MATERIAL EXAMINED: *Ancyrophorus ketmenicus* — HOLOTYPE (♂): "Хр. Кетмень ущ. Долайты [$+43.34/+79.62^{\circ}$], 14.VII.[19]88, [leg.] В. Кашеев" (ZISP). — PARATYPES (8): same data as holotype (ZISP, 4). — Тарбагатай р. Базар [$+47.46/+82.00^{\circ}$], 22.VIII.1988, [leg.] В. Кашеев (ZISP, 2). — Джунгар[ский] Алатау], р. Кескен-терек [$+44.64/+78.89^{\circ}$], 28.VIII.1988, [leg.] В. Кашеев, [берега горных рек] (ZISP, 2).

OTHER MATERIAL: **KAZAKHSTAN:** W. Tian Shan, Chimkent Reg., Aksu-Dzhabagly, Ulken Kaindi [stream], 2100m [$42^{\circ}23'14''\text{N}$, $70^{\circ}37'00''\text{E}$], 11.VI.1999, leg. J. Cooter, coll. Rougemont, OXUM (2). — SE Kazakhstan, S Dzhungarskiy Alatau, Tyschkan Valley N Sarybel, 1700-1800m $+44.50/+80.07^{\circ}$, 5-7.VI.2001, leg. W. Schawaller, SMNS (1♂). — Джунгарский Алатау, р. Кескен-терек $+44.64/+78.89^{\circ}$, 28.VIII.1988, leg. В. Кашеев, берега горных рек, MHNG (1♂). — Ketmen, NW foothills of Mt. Kurajly (Temerlik mountains) nr. town Kenbulak, 1600-1900m $+43.13/+79.37^{\circ}$, areas w/*Picea tianschanica*, 19-20.VI.1992, leg. A. Solodovnikov, coll. Solodovnikov, ZMUC (1♂). — **KYRGYZSTAN:** N Inter Tian Shan, Kirghizsky Mt., Ala-Artacha, 2900m $+42.48/+74.47^{\circ}$, 19.VI.1995, V. Shchurov, NHMB (1). — Same but 2000-2300m, 21-22.VI.1982, leg. J. Selinek, NMPC (19). — **TAJIKISTAN:** Pamir-Alai, Hissar Mts., Warsob valley, Siddi, 2000m $+39.03/+68.79^{\circ}$, 29.VI.1990, leg. M. Schülke & D. Wrase, coll. Schülke (1). — NW-Pamir, Peter-I. Mts., Tshil-Dara, 1700-2300m $+38.79/+70.35^{\circ}$, 21-24.VI.1990, leg. M. Schülke & D. Wrase, coll. Schülke (1♂).



FIGS 389-394

Tergites VIII; *Ochtheophilus nitidus* (Cameron) (389), *O. schuelkei* sp. n. (390), *O. nepalensis* (Scheerpeltz) (391), *O. incognitus* sp. n. (392), *O. enigmaticus* sp. n. (393), *O. championi* (Bernhauer) (394). Scale bar = 0.1 mm for 391, 393, 0.11 mm for 389-390, 0.13 mm for 394.

REDESCRIPTION: Forebody as in Fig. 550. Measurements (n=10): HW = 0.65 (0.62-0.69); TW = 0.60 (0.58-0.63); PW = 0.77 (0.74-0.80); SW = 1.00 (0.96-1.06); AW = 1.09 (1.02-1.20); HL = 0.51 (0.48-0.54); EL = 0.20 (0.18-0.21); TL = 0.11 (0.10-0.12); PL = 0.63 (0.60-0.64); SL = 1.15 (1.06-1.18); SC = 1.05 (0.96-1.10); FB = 2.36 (2.24-2.50); BL = 4.45 (4.00-4.80) mm. Head, pronotum and abdomen dark brown with an occasional reddish tint. Elytra reddish medium to dark brown, darker around scutellum to shoulders and in a transversal stripe at elytral apex. Legs, mouthparts and antennae reddish medium brown, but antennae (except basal articles) sometimes dark brown. In some specimens mid-tibiae dark brown but femora (except apex) remaining dark. Body moderately lustrous due to not so deep punctation on head and pronotum, but distinct coriaceous microsculpture covering interspaces; very short but strong elytral setation. Pubescence on elytra short but strong and rather dense (regularly spaced), in contrast with much less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to latero-sternites. Head anterior eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex with occasional stronger and longer setae near sutural corners. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 425. Clypeus (Fig. 388) sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 411) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head more dense on confined posterior part and sides, on pronotum more evenly spaced, very fine, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete. Elytral apex without conspicuous setae.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle

(Fig. 412) with more coarse spiniform processes. Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 413. Female ringstructures as in Figs 414-415.

COMPARATIVE NOTES: This species is superficially similar to *O. sericinus* (in fact one of the paratypes of *O. ketmenicus* has turned out to be *O. sericinus*), similarly sized and coloured. Attention to details (lack of antennal modification, different elytral setation, lack of small incisions at apex of tergite X), however, reveals its identity.

DISTRIBUTION: The species is so far known from Kazakhstan, Kyrgyzstan and Tajikistan.

BIONOMICS: Specimens were collected under stones, boulders, debris alongside stream.

Ochtheophilus loebli sp. nov.

Figs 406-407, 419-422, 426, 552

TYPE MATERIAL: HOLOTYPE (♂): "JAPAN: Gunma, Nikko Nat.[ional] Park, ss/[under] Konsei Pass, 1500m [*+36.81/+139.34*], [leg. I.] Löbl, 15.VII.1980 [wooden ravine, steep place with stream, sifting from damp/very wet leaf litter]" (MHNG). – PARATYPES (8): same data as holotype (MHNG, 3♀, 1, KUEC, 1, NHMW, 1, HNHM, 1♀). – "Honshu, Gumma Pref., Nikko distr., Konsei Pass, 1800-1900m, 13.VII.1980, leg. P.M. Hammond" (BMNH, 1♂).

DESCRIPTION: Forebody as in Figs 406, 552. Measurements (n=9): HW = 0.56 (0.53-0.58); TW = 0.54 (0.51-0.565); PW = 0.68 (0.64-0.70); SW = 0.77 (0.70-0.80); AW = 0.95 (0.87-1.03); HL = 0.47 (0.44-0.50); EL = 0.17 (0.16-0.18); TL = 0.11 (0.10-0.13); PL = 0.55 (0.52-0.58); SL = 0.87 (0.77-0.91); SC = 0.78 (0.68-0.82); FB = 1.95 (1.79-2.02); BL = 4.00 (3.69-4.20) mm. Head, pronotum and abdomen very dark brown with a distinct reddish tint. Elytra reddish dark brown occasionally more reddish but scutellar area to shoulders and along suture remaining darker, blackish. Mouthparts, antennae and legs reddish dark brown, tarsi and both ends of tibiae often lighter, reddish medium brown. Very rarely antennae (towards apex) lighter, more reddish medium brown. Body with greasy lustre due to not so deep punctation on head and pronotum, but distinct coriaceous microsculpture covering interspaces; strongly punctate and uneven elytral surface. Pubescence on elytra short but strong and rather dense (regularly spaced), in contrast with much less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuously longer seta. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 426. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supra-antennal prominences well developed, feebly separated from clypeus/vertex by

impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 407) slightly bulging, evenly curved, little longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 2/3 bisinuate, before corner concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head moderately dense, more so on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete. Elytral apex without conspicuous setae.

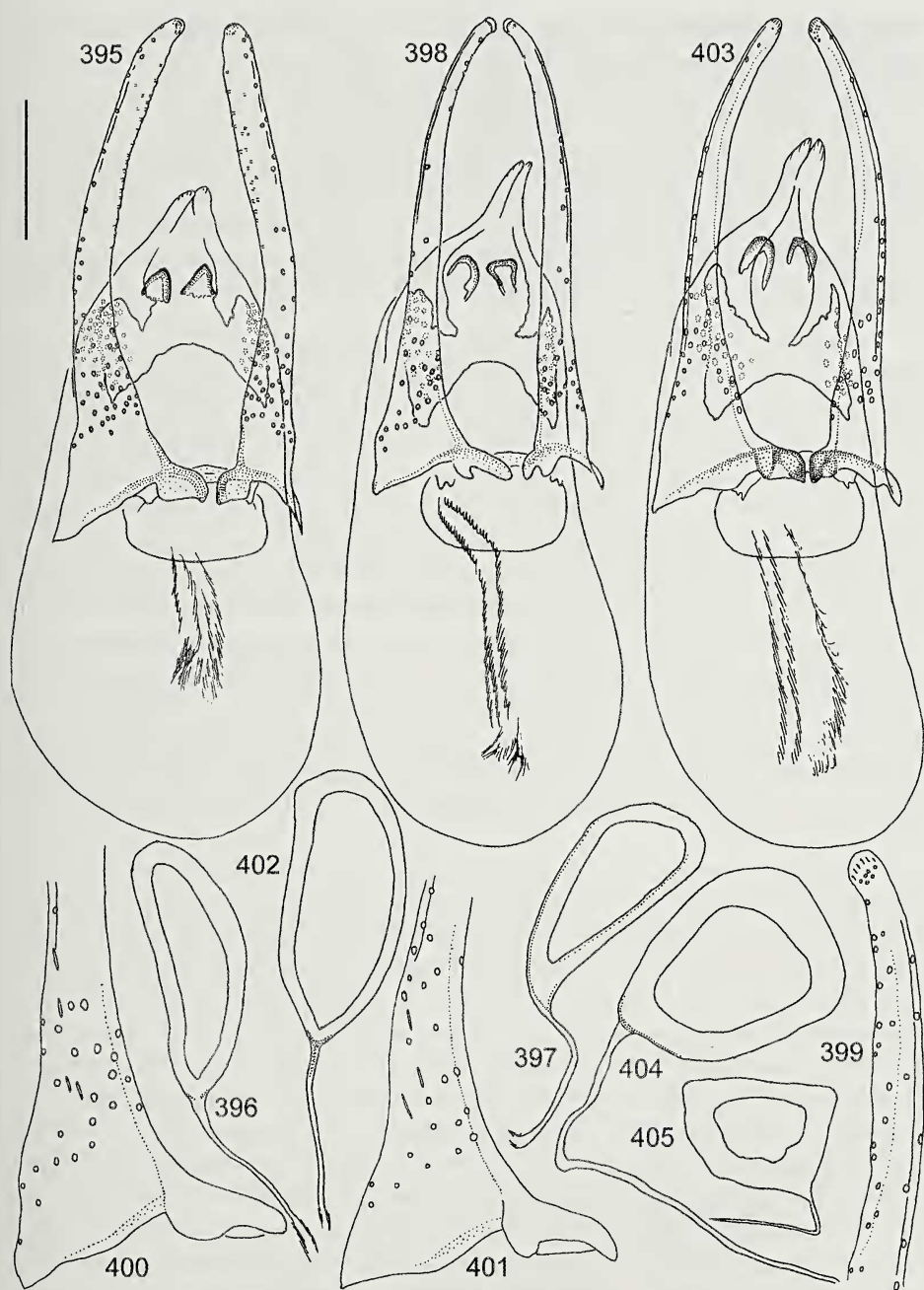
Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 419. Spermatheca as in Fig. 420, female ringstructures as in Figs 421-422.

ETYMOLOGY: Named after Dr. Ivan Löbl (now Veyrier, Switzerland, originally from Bratislava, Slovakia), a very knowledgeable and influential worker on all Staphylinidae (but specialist on Scaphidiinae and Pselaphinae) who helped me a great deal in the early days.

COMPARATIVE NOTES: As stated under *O. itoi*, these two endemic Japanese species are well separable from the more widely distributed congeners, but as both are rather variable, can be difficult to separate from each other. Besides characters given in the key, *O. loebli* often has small and rather short elytra, with somewhat "inflated", longer and wider abdomen, although such appearance may be inflicted by the disproportionately smaller elytra. This habitus may be suggestive of a particular lifestyle.

DISTRIBUTION: Only known from Japan, very likely endemic, currently known from only one locality.

BIONOMICS: Specimens were collected by sifting from very wet leaf litter near forest stream.



FIGS 395-405

(395-397) *Ochtheophilus nigerrimus* (Cameron); aedeagus (395), female ringstructures (396-397). (398-402) *O. championi* (Bernhauer); aedeagus (398), apex of paramere (399), bases of parameres (400-401), female ringstructure (402). (403-405) *O. hammondi* sp. n.; aedeagus (403), female ringstructures (404-405). Scale bar = 0.05 mm for 404-405, 0.06 mm for 396-397, 399-402, 0.1 mm for 395, 403, 0.11 mm for 398.

Ochtheophilus nigerrimus (Cameron, 1941)

Figs 18, 395-397, 554, 588

Ancyrophorus nigerrimus Cameron, 1941: 146.*Ochtheophilus nigerrimus* (Cameron). – Herman, 1970: 384.

TYPE MATERIAL EXAMINED: *Ancyrophorus nigerrimus* – LECTOTYPE (here designated): "Type [red margined round disc, curator label] \ Ghum district; v-vi-31; Dr. Cameron \ A.; nigerrimus; Type Cam. \ M. Cameron.; Bequest.; B.M. 1955-147.; \ Lectotypus; Ancyrophorus; nigerrimus Cameron; [on the back] des. Makranczy, 1999 \ Ochtheophilus; championi Bernhauer; det. Makranczy, 1999" (BMNH). – PARALECTOTYPES (6): same data as lectotype (BMNH, 6).

OTHER MATERIAL: **INDIA:** Ghum district [Ghoom, Darjeeling district *+27.02/+88.16*], V-VI.[19]31, leg. M. Cameron, coll. Last, MMUE (4), coll. Cameron, BMNH (60), MHNG (1♂, 1), NHMW (1♂), HHNM (3♂, 2♀, 1).

REDESCRIPTION: Forebody as in Fig. 554. Measurements (n=10): HW = 0.64 (0.60-0.67); TW = 0.58 (0.55-0.62); PW = 0.70 (0.65-0.76); SW = 0.96 (0.90-1.06); AW = 0.98 (0.92-1.08); HL = 0.51 (0.48-0.54); EL = 0.23 (0.21-0.24); TL = 0.10 (0.09-0.11); PL = 0.56 (0.51-0.59); SL = 1.10 (1.03-1.18); SC = 1.01 (0.94-1.06); FB = 2.26 (2.10-2.36); BL = 4.24 (3.88-4.83) mm. Whole body dark brown with occasional slight reddish tint, antennae and mouthparts dark brown. Legs mostly dark brown; if lighter, tibiae (except both ends) and apices of femora darker. Body with moderate lustre due to very dense elytral setation and fine, dense punctation all over. Pubescence on elytra short but strong and rather dense (and irregularly spaced), in contrast with much less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head antieriad eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; around middle of tibiae with 2-3 darker bristles. Elytral apex with an occasional, slightly longer seta near sutural corner. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 588. Clypeus sparsely and shallowly punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples barely bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head rather dense, even more so on posterior part and

sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 395. Female ringstructures as in Figs 396-397.

COMPARATIVE NOTES: Stands out by its large body size and within the *O. vulgaris* species group by a body setation similar to that of the *O. emarginatus* group, but lacking their antennal modification, while possessing a medially modified fringe of tergite VII (absent in the aforementioned group).

DISTRIBUTION: The species is so far known from the Indian Himalaya.

BIONOMICS: No bionomical information is preserved for the known specimens.

***Ochtheophilus vulgaris* (Watanabe & Shibata, 1961)** Figs 437-439, 555, 568

Ancyrophorus vulgaris Watanabe & Shibata, 1961: 7.

Ochtheophilus vulgaris (Watanabe & Shibata). – Herman, 1970: 385. – Lee & Ahn, 2007: 116. – Watanabe, 2007: 58.

Ochtheophilus masatakai Watanabe, 2007: 55, **syn. nov.**

TYPE MATERIAL EXAMINED: *Ancyrophorus vulgaris* – PARATYPES (3): “Daibosatsu. Pass [*+35.75/-138.85*]; Yamanashi pref.; May-20th 1960; Coll. Y. Watanabe \ {Paratype}; *Ancyrophorus vulgaris*; Yasuaki Watanabe et; Yasutoshi Shibata, 1961.” (coll. Watanabe, 2♂, 1♀).

OTHER MATERIAL: see Appendix.

REDESCRIPTION: Forebody as in Fig. 555. Measurements (n=10): HW = 0.61 (0.56-0.66); TW = 0.55 (0.50-0.58); PW = 0.70 (0.63-0.76); SW = 0.91 (0.79-1.00); AW = 0.97 (0.80-1.10); HL = 0.48 (0.43-0.52); EL = 0.22 (0.20-0.23); TL = 0.09 (0.08-0.11); PL = 0.56 (0.48-0.63); SL = 1.10 (0.95-1.22); SC = 0.98 (0.84-1.12); FB = 2.18 (1.88-2.43); BL = 3.86 (3.43-4.21) mm. Whole body blackish dark brown with occasional reddish tint. Mouthparts and antennae dark brown, legs also but tarsi and both ends of tibiae lighter, reddish medium brown. Rarely occurring lighter specimens with elytra distinctly reddish except scutellar area to shoulders and a transversal stripe at apex darker, almost black; basal antennomeres also lighter, reddish. Body with greasy lustre due to medium dense elytral setation and fine but dense punctation all over. Pubescence on elytra short but strong and rather dense (regularly spaced), in contrast with much less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head

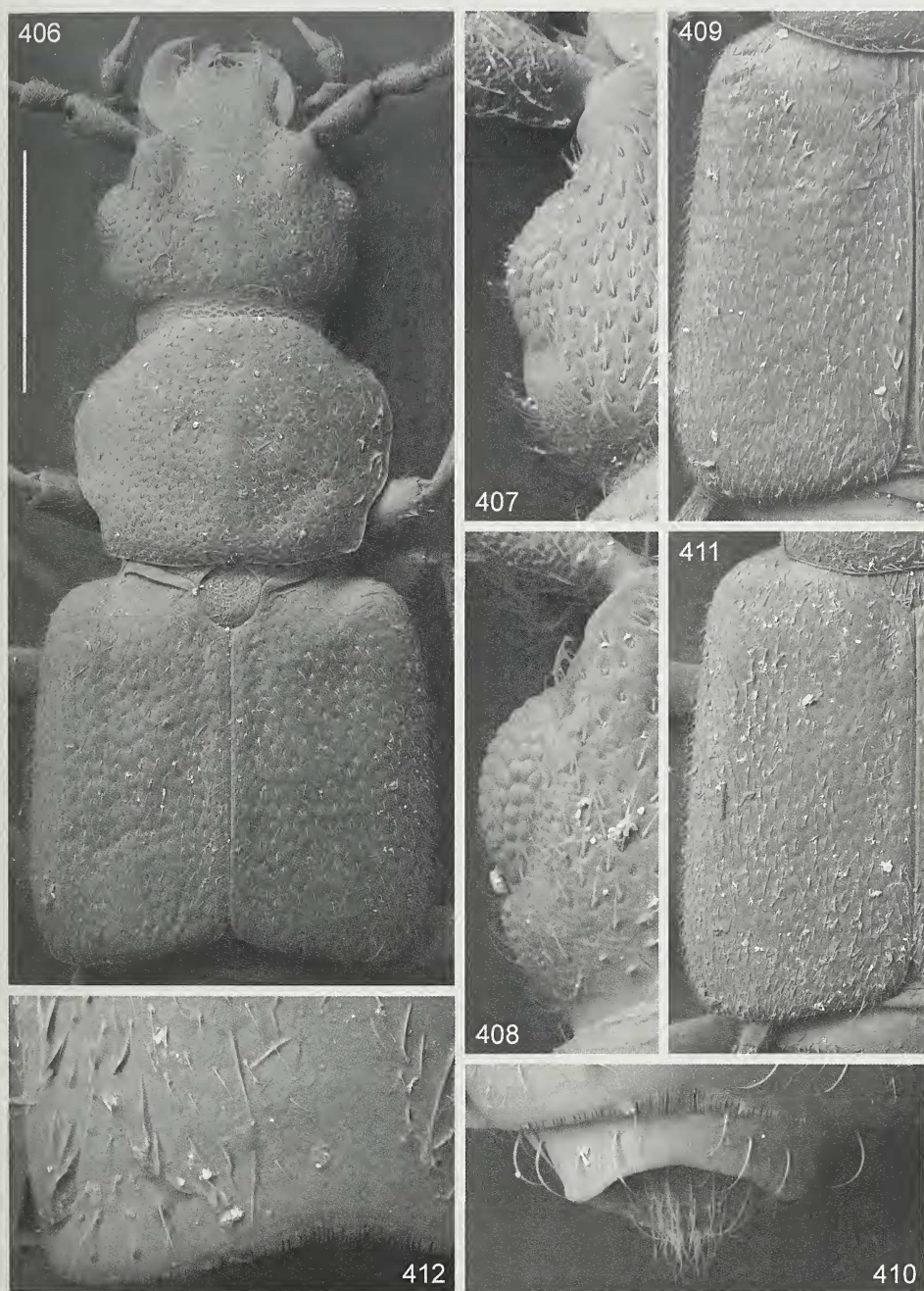
anteriad eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex with an occasional, slightly longer seta near sutural corner. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 568. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 moderately concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather uneven, posterior half of disc slightly impressed plus two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head moderately dense, even more so on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 437. Female ringstructures as in Figs 438-439.

COMPARATIVE NOTES: This is an extremely variable species, large sized, similar to *O. planus*, but can be easily separated from it by the posterior margin of tergite VII without broadened palisade fringe that is present in *O. planus*.

NOTES: The name '*Ochtephilus masataakai*' was published in 2007, after my type study was finished and while this publication was in preparation, with complete ignorance of my work and efforts (in fact at the very same time Watanabe's types were on loan to me!). The description compares the new taxon to *O. vulgaris*, but fails to



FIGS 406-412

(406-407) *Ochtheophilus loebli* sp. n.; forebody (406), side of head (407). (408-410) *O. hammondi* sp. n.; side of head (408), elytron (409), abdominal apex, female (410). (411-412) *O. ketmenicus* (Kashcheev); elytron (411), left side of tergite VII (412). All SEM, dorsal views. Scale bar = 0.20 mm for 408, 0.23 mm for 407, 412, 0.30 mm for 410, 0.5 mm for 406, 409, 0.64 mm for 411.

realize that this species is wide-ranging and extremely variable. The characters discussed in the description are rather irrelevant in terms of the truly diagnostic traits (Makranczy 2001 with these had already been published). However, a habitus photograph and an aedeagus drawing is presented and the diagnostic features are within the variability range of *O. vulgaris*. The aedeagus as figured is totally identical to that of the aforementioned species. Furthermore, numerous specimens from Taiwan studied by me agree with the presented habitus photograph, so there is no reason to doubt the name being a synonym of *O. vulgaris*.

DISTRIBUTION: The species is so far known from Japan, Korea, Taiwan, the Russian Far East and northeast China.

BIONOMICS: Collected in Picea-Populus-Betula forest, litter, dead wood and moss sifted, also in wet bed of dried-out creek.

IX. *Ochtheophilus wrasei* species group

Ochtheophilus wrasei sp. nov.

Figs 20, 427, 428, 440-442

TYPE MATERIAL: HOLOTYPE (♂): “CHINA: YUNNAN: Nujiang Lisu Auton. Prefecture, Gaoligong Shan, pass 22km W Gongshan, N slope, 3350-3400m, 27°46'27"N, 98°26'50"E, 6.VI.2007, leg. M. Schülke [CH07-21], fern, moss, litter, sifted” (ZMHB). – PARATYPES (43): same data as holotype (coll. Schülke, 14, MHNG, 1, NHMW, 1, AMNH, 1, NKME, 1, SDEI, 1, MNHP, 1, FMNH, 1, SEMC, 1, CNCI, 1, USNM, 1, ISNB, 1, HNHM, 2♂, 2♀). – “Nujiang Lisu Auton. Prefecture, Gongshan Co., Gaoligong Shan, sidevalley, 3000-3050m, 27°47.90'N, 98°30.19'E, 21.VI.2005, leg. M. Schülke (C2005-16), coniferous forest with *Rhododendron*, broad leaved bushes, litter, moss, dead wood sifted along creek and snowfields” (coll. Schülke, 3). – “Nujiang Lisu Pref., Gaoligong Shan, W “Cloud pass”, 24km NW Liuku, 2907m, 25°59'00"N, 98°40'14"E, 3.IX.2009, leg. M. Schülke (CH09-23), small waterfall, wet moss sifted” (coll. Schülke, 4). – “Nujiang Lisu Pref., Gaoligong Shan, W “Cloud pass”, 24km NW Liuku, 2940m, 25°59'02"N, 98°39'56.5"E, 3.IX.2009, leg. M. Schülke (CH09-24), small cleft, wet moss and litter sifted” (coll. Schülke, 2). – “Dali Bai Auton. Prefecture, Diancang Shan W Dali, 3160m, 25°41'20"N, 100°06'12"E, 27.V.2007, leg. M. Schülke (CH07-02), small creek valley, litter and debris sifted” (coll. Schülke, 2), same but 28.V.2007 (CH07-02A) (coll. Schülke, 2), same but 27.V.2007, leg. D.W. Wrase (02) (MSNV, 1♂).

DESCRIPTION: Forebody as in Fig. 428. Measurements (n=10): HW = 0.65 (0.59-0.68); TW = 0.61 (0.57-0.65); PW = 0.71 (0.67-0.75); SW = 0.89 (0.83-0.95); AW = 1.01 (0.92-1.12); HL = 0.49 (0.46-0.52); EL = 0.20 (0.18-0.21); TL = 0.13 (0.12-0.14); PL = 0.54 (0.52-0.58); SL = 1.01 (0.94-1.06); SC = 0.92 (0.85-0.97); FB = 2.12 (2.01-2.23); BL = 3.95 (3.50-4.24) mm. Body very dark brown to almost pitch black, tarsi and both ends of tibiae lighter, medium to dark brown. Legs occasionally lighter but antennae and mouthparts always nearly black. Body quite lustrous in spite of deep punctuation on head and pronotum, but abundant shiny interspaces and indistinct coriaceous microsculpture covering them; elytral setation short but strong, not too dense. Pubescence on elytra short but strong and rather dense (regularly spaced), in contrast with much less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 427. Clypeus almost impunctate (faintly microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples slightly bulging, evenly curved, little longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, visible to anterior pronotal corners. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head very strong and deep, more dense on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, with small concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 440. Female ringstructures as in Figs 441-442.

ETYMOLOGY: This species is named after David W. Wrase, specialist on Carabidae, who (through the collection of Michael Schülke) contributed greatly to the material and knowledge about the Chinese species of the genus.

NOTES: This is a very difficult taxon to place in the herein proposed species group system. The elongate loop-like female ringstructure is characteristic of the *O. monticola* group, yet every species there has a modified paramere and elongate striated band in the aedeagi, so in this respect *O. wrasei* is closer to the *O. vulgaris* group. In the final days of the preparation of this manuscript it was decided that *O. wrasei* is better placed in its own group.

DISTRIBUTION: Currently only known from the Chinese province of Yunnan.

BIONOMICS: Specimens were collected in coniferous forest with *Rhododendron* and broad leaved bushes, from moss, litter, debris and even dead wood sifted along stream, waterfall and snowfields.

X. Ochtheophilus monticola species group

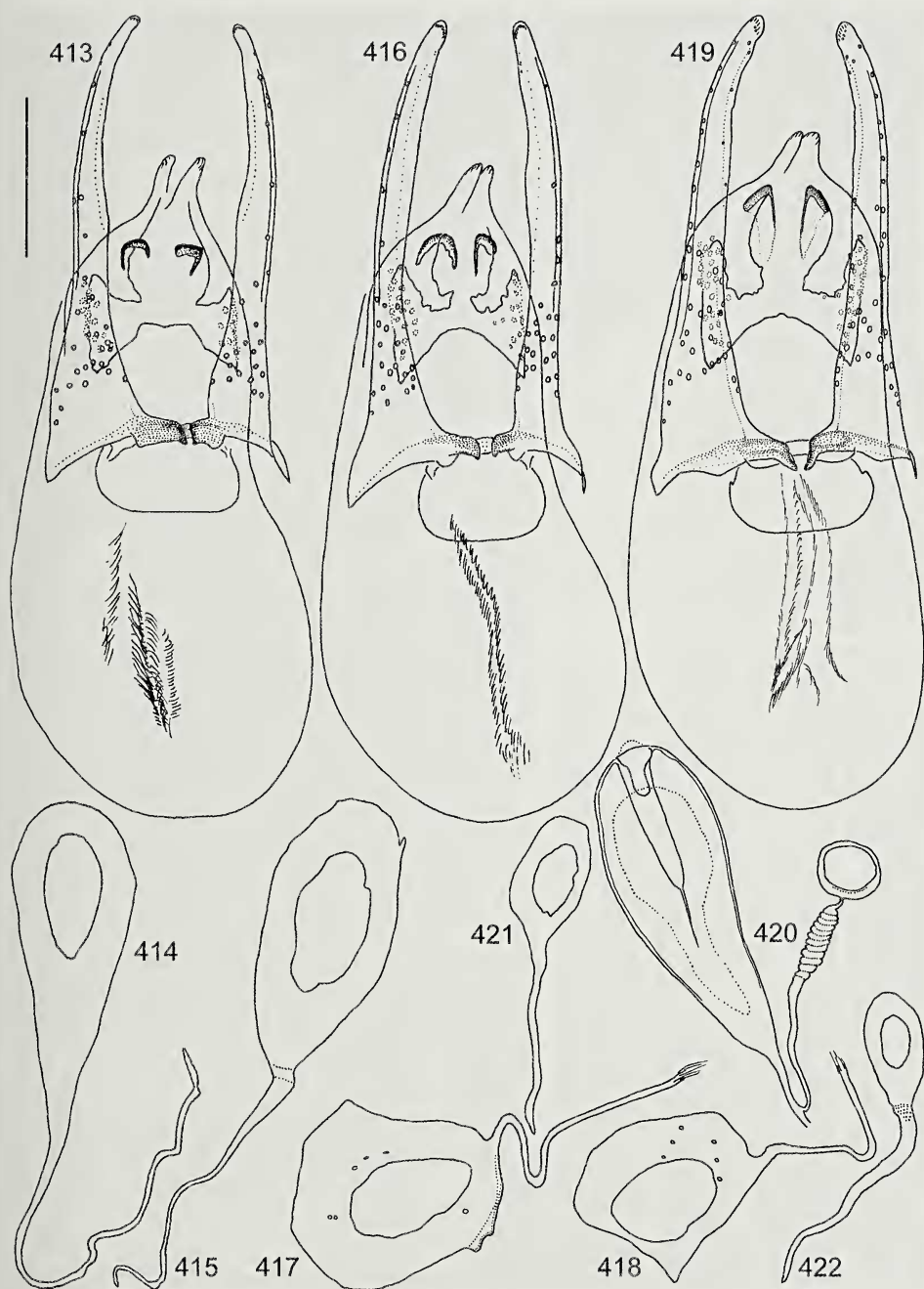
Ochtheophilus assingi sp. nov.

Figs 430, 501-503

TYPE MATERIAL: HOLOTYPE (♂): “**CHINA:** SHAANXI: Qin Ling Shan, Autoroute km93 S of Zhouzhi, 108km SW Xian, 1650m 33°45'N, 107°56'E, 1-2.IX.1995, leg. A. Pütz, mountain forest, sifted” (SDEI). – PARATYPES (65): same data as holotype (coll. Pütz, 1♂). – “Qinling Shan, pass on rd. Zhouzhi - Foping, 105km SW Xi'an, N-slope, 33°44'N, 107°59'E, 1990m, 2./4.VII.2001, leg. M. Schülke (C01-01), small creek valley, mixed deciduous forest/bamboo/small meadows, dead wood, mushrooms; sifted” (coll. Schülke, 1♂, 13, coll. Assing, 2♂, 1♀), same but leg. D. Wrase (01) (HNHM, 1♂, 2, IZAS, 2). – “Qinling Shan, pass on rd. Zhouzhi - Foping, 105km SW Xi'an, N-slope, 33°44'N, 107°58'E, 1880m, 4.VII.2001, leg. M. Schülke (C01-03), shady rockwall base, moist; sifted” (coll. Schülke, 3). – “HUBEI: Daba Shan, pass E of Mt. Da Shennongjia, 12km NW Muyuping, 31°30'N, 110°21'E, 1950-2050m, 19.VII.2001, leg. M. Schülke (C01-13C), creek valley, mixed deciduous forest, moss, dead wood, mushrooms; sifted” (coll. Schülke, 2). – “Daba Shan, mountain range NE Muyuping, pass 12km N Muyuping, 31°32'N, 110°26'E, 2380m, 17.VII.2001, leg. M. Schülke (C01-15), N pass, N-slope with young deciduous forest, bank of small creek, moss; sifted” (coll. Schülke, 1♀, 22, NKME, 1♂, MNHP, 1♂, USNM, 1♂, CNCI, 1♂, AMNH, 1♂, SEMC, 1♂, SMNS, 1♂, MHNG, 1, ISNB, 1♀, FMNH, 1♀). – “YUNNAN: Zhongdian Co., 33km ESE Zhongdian, 27°41.5'N, 100°00.7'E, 3200m, 24.VIII.2003, leg. M. Schülke (C03-14), creek valley with old mixed forest, dead wood, bamboo, moss, mushrooms” (coll. Schülke, 1♂). – “50km N Lijiang, Yulongshan National Forest Park [SE of Dazu (Daju) Co. +27.27/+100.29], 24-29.VI.1993, leg. E. Jendek & O. Sausa” (NHMW, 2♂, 1♀).

DESCRIPTION: Habitus as in Fig. 430. Measurements (n=10): HW = 0.55 (0.52-0.57); TW = 0.52 (0.49-0.54); PW = 0.65 (0.61-0.67); SW = 0.76 (0.71-0.79); AW = 0.92 (0.87-1.00); HL = 0.43 (0.41-0.44); EL = 0.17 (0.15-0.18); TL = 0.11 (0.10-0.12); PL = 0.53 (0.50-0.54); SL = 0.85 (0.80-0.90); SC = 0.76 (0.71-0.81); FB = 1.89 (1.77-1.96); BL = 3.61 (3.35-3.90) mm. Head, pronotum and abdomen dark brown with occasional reddish tint. Elytra reddish medium to dark brown (darker around scutellum to shoulders and even along suture). Mouthparts and legs reddish medium brown, antennae also but occasionally darker except basal articles. Body with greasy lustre due to rather shallow punctation on head and pronotum, but strong coriaceous microsculpture on interspaces everywhere; elytral punctation deep, surface uneven and setation strong, more dense than in closest congeners. Pubescence on elytra moderately short, very regularly spaced, in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 430. Clypeus faintly punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by



FIGS 413-422

(413-415) *Ochtheophilus ketmenicus* (Kashcheev); aedeagus (413), female ringstructures (414-415). (416-418) *O. itoi* sp. n.; aedeagus (416), female ringstructures (417-418). (419-422) *O. loebli* sp. n.; aedeagus (419), spermatheca (420), female ringstructures (421-422). Scale bar = 0.038 mm for 414-415, 0.47 mm for 417-418, 421-422, 0.1 mm for 416, 419, 0.115 mm for 413, 420.

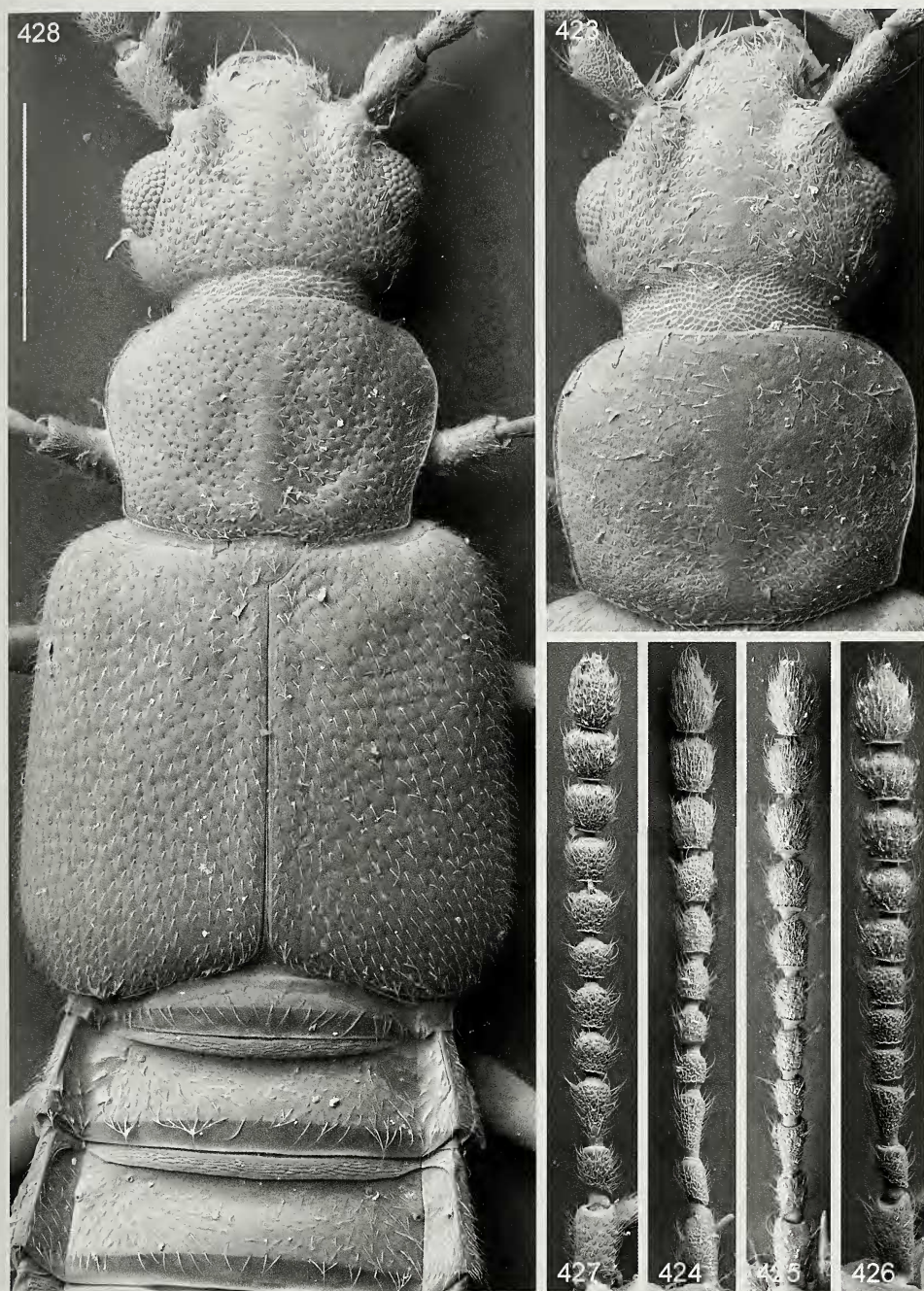
impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples slightly bulging, evenly curved, little longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head shallow and moderately dense, more so on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) less than puncture diameters, punctures discrete but much smaller apically.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 501. Female ringstructures as in Figs 502-503.

ETYMOLOGY: The species is named after Dr. Volker Assing (Hannover, Germany), reknowned authority on Staphylinidae, who was very helpful in so many ways during so many years.

COMPARATIVE NOTES: Under the first species in this species group a warning must be included that it is ill-advised to attempt to identify any species without examination of at least the male genitalia. The *O. monticola* complex has a peculiar formation of parameres and possibly includes several undescribed species. Once this assemblage is ruled out there is a reasonable chance for determination. As for *O. assingi*, it seems to be a rather variable species, almost always with lighter (reddish) elytra, but some specimens (including the holotype) have peculiarly short elytra, while in some others this feature is not so expressed (all share the same genitalia). If they indeed belong to the same species, any other congeners can be distinguished by the form of the parameres.

DISTRIBUTION: Currently only known from the Chinese provinces of Yunnan, Shaanxi and Hubei.



FIGS 423-428

(423-424) *Ochtheophilus hammondi* sp. n.; head and pronotum (423), antenna (424). (425) *O. ketmenicus* (Kashcheev), antenna. (426) *O. loebli* sp. n., antenna. (427-428) *O. wrasei* sp. n.; antenna (427), forebody and base of abdomen (428). All SEM, dorsal views. Scale bar = 0.45 mm for 426, 0.5 mm for 423, 0.55 mm for 424, 427-428, 0.6 mm for 425.

BIONOMICS: Specimens were collected by sifting moss and other moist organic material on forest floor, in vicinity of streams or shaded rockwall.

***Ochtheophilus basicornis* (Cameron, 1941)**

Figs 447-454, 557

Ancyrophorus basicornis Cameron, 1941: 146.

Ochtheophilus basicornis (Cameron). – Herman, 1970: 384.

TYPE MATERIAL EXAMINED: *Ancyrophorus basicornis* – LECTOTYPE (♂, here designated): "Type [red margined round disc, curator label] \ Ghum district [Darjeeling district, Ghoom, *+27.02/+88.16*]; v-vi-[19]31; Dr. Cameron \ A.; basicornis; Type Cam. \ M. Cameron.; Bequest.; B.M. 1955-147.; \ Lectotypus; Ancyrophorus; basicornis Cameron; [on the back] des. Makranczy, 1999 \ Ochtheophilus; basicornis Cameron; det. Makranczy, 1999" (BMNH). – **PARALECTOTYPES** (5): same data as lectotype (BMNH, 5).

OTHER MATERIAL: **NEPAL:** E-Nepal, Kosi, Forêt S Mangsingma, 2200m *+27.52/+87.33*, 11.IV.1984, leg. I. Löbl & A. Smetana (13), very steep slope, sifting of Sphagnum, mosses, very wet litter, MHNG (1♂, 1), E-Nepal, Kosi, Forêt S Mangsingma, 2300m *+27.51/+87.33*, 13.IV.1984, leg. I. Löbl & A. Smetana (15), singled on riverbank, MHNG (1♂, 1), HNHM (1♂). – Khandbari district, "Bakan", W of Tashigaon, 3200m *+27.65/+87.21*, 5.IV.1982, leg. A. & Z. Smetana, MHNG (1♀, 1). – Khandbari district, "Bakan", W of Tashigaon, 3250m *+27.64/+87.21*, 4.IV.1982, leg. A. & Z. Smetana, MHNG (1). – Khandbari district, above Tashigaon, 3100m *+27.63/+87.20*, 8.IV.1982, leg. A. & Z. Smetana, MHNG (1). – Kosi, [Sankhuwasawa distr.,] Val. Induwa K[h]ola, 2800m *+27.52/+87.42*, 15.IV.1984, leg. I. Löbl & A. Smetana (22), sieved *Rhododendron* and bamboo leaf litter accumulated along rocks, MHNG (1). – SW-Manaslu, Bhara Pokhari Lekh Kamm, unterh. see Bhara Pokhari, 2500m *+28.30/+84.47*, 2.IV.1999, leg. O. Jäger, Bodengesiebe, SMTD (8). — **INDIA:** Ghum distr., Mangpo *+26.97/+88.37*, V.1931, leg. M. Cameron, coll. Cameron, BMNH (1♀), HNHM (1♂, 1♀). — **CHINA:** YUNNAN: Diqing Tibet Aut. Pref., Zhongdian Co., 35km ESE Zhongdian, 3450m, 27°41.00'N, 100°01.47'E, 3.VI.2005, leg. M. Schülke (C2005-03), devastated mixed forest near small creek, litter, moss, dead wood, sifted, coll. Schülke (2). – Diqing Tibet Aut. Pref., Deqin Co., Meili Xue Shan, E side, 12km SW Deqin, 2890m, 28°25.30'N, 98°48.47'E, 9.VI.2005, leg. M. Schülke (C2005-07), small creek valley, mixed forest with bamboo, leaf litter, moss, dead wood, sifted, coll. Schülke (4), same but 13.VI.2005 (C2005-7A), coll. Schülke (3), same but 9-13.VI.2005, leg. D.W. Wrase (07), mixed forest with bamboo, under wood/stones in litter/soil, HNHM (1). – GANSU: Dalijia Shan, 46km W Linxia, 2980m *+35.60/+102.70*, 10.VII.1994, leg. A. Smetana (C5), coll. Smetana (1♂).

REDESCRIPTION: Forebody as in Fig. 557. Measurements (n=10): HW = 0.56 (0.53-0.58); TW = 0.54 (0.50-0.57); PW = 0.65 (0.615-0.69); SW = 0.76 (0.68-0.79); AW = 0.91 (0.82-0.95); HL = 0.43 (0.40-0.45); EL = 0.16 (0.15-0.17); TL = 0.12 (0.105-0.15); PL = 0.56 (0.52-0.59); SL = 0.83 (0.76-0.89); SC = 0.76 (0.71-0.81); FB = 1.88 (1.74-2.01); BL = 3.64 (3.44-3.85) mm. Head blackish dark brown, pronotum elytra and abdomen reddish dark brown. Mouthparts, antennae and legs reddish medium to dark brown; antenna often with basal antennomeres lighter, reddish medium brown, rest sometimes blackish. Body with greasy lustre due to rather deep but not too rough punctation on head and pronotum, but distinct coriaceous microsculpture on interspaces everywhere; elytral punctation deep, surface uneven and setation strong, shorter than in closest congeners. Pubescence on elytra moderately dense but very regularly spaced, in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae



FIGS 429-430

Habitus of *Ochtheophilus* species. *O. biimpressus* (Mäklin) (429), *O. assingi* sp. n. (430).

with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 449. Clypeus (Fig. 447) sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 448) slightly bulging, evenly curved, little longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 450) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head moderately rough but more dense only on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle (Fig. 451) with more coarse spiniform processes. Tergite VIII basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 452. Female ringstructures as in Figs 453-454.

COMPARATIVE NOTES: Details under *O. monticola*, with remarks on the complex.

DISTRIBUTION: The species is so far known from N-India, Nepal and the Chinese provinces of Yunnan and Gansu.

BIONOMICS: Specimens were collected from various organic materials (mosses, very wet leaf litter) at fast flowing waters (streams and rivers), sometimes under stones and drift wood.

Ochtheophilus indicus sp. nov.

Figs 493-497, 504-506

TYPE MATERIAL: HOLOTYPE (♂): "INDIA: Punjab [part today Himachal Pradesh], Kul[li]u, Bhab[b]u Pass, 9000ft [$+31.93/+77.00^*$], 4.V.1926, leg. H.G. Champion, torrent moss" (BMNH). – PARATYPES (6): same data as holotype (BMNH, 3 ♀, MHNG, 1 ♀, NHMW, 1 ♀). – "Punjab, Kul[li]u, Naggar, 5000ft [$+32.11/+77.15^*$], leg. H.G. Champion" (BMNH, 1 ♀).

DESCRIPTION: Measurements (n=7): HW = 0.60 (0.58-0.61); TW = 0.55 (0.54-0.56); PW = 0.66 (0.64-0.69); SW = 0.87 (0.86-0.90); AW = 0.92 (0.90-0.94); HL = 0.46 (0.44-0.48); EL = 0.19 (0.18-0.20); TL = 0.09 (0.08-0.10); PL = 0.54 (0.54-0.56); SL = 1.03 (1.00-1.04); SC = 0.94 (0.92-0.96); FB = 2.11 (2.00-2.20); BL = 3.72 (3.30-3.94) mm. Head, pronotum and abdomen dark brown (but lighter than in most related species), head darkest, abdominal base sometimes lighter. Elytra medium brown, broadly around scutellum (and to shoulders) darker, blackish. Antennae and mouthparts dark brown, but first two antennomeres sometimes lighter. Legs medium to dark brown. Body with somewhat greasy lustre due to moderately deep but not too dense punctation on head and pronotum, but less distinct coriaceous microsculpture on some parts of head and pronotum; elytral punctation fine, rather shallow. Pubescence on elytra very dense, short and finer than in closest congeners; in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and dense setae. Abdominal tergites with setae finer than elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anteriorly eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 495. Clypeus (Fig. 493) sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 494) slightly bulging, evenly curved, about as long as than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 496) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head rather sparse, stronger and more dense on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average inter-

spaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle (Fig. 497) with more coarse spiniform processes. Tergite VIII basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 504. Female ringstructures as in Figs 505-506.

ETYMOLOGY: The species is named after the country from where the examined specimens originate.

COMPARATIVE NOTES: This is a smaller species with (at least in the few known specimens) somewhat lighter, reddish elytra, a feature shared with not many other species in this group. Another peculiar feature is the fully visible marginal bead on the pronotal side, shared only with a larger black species, *O. szarukani*, outside the *O. monticola* complex.

DISTRIBUTION: Currently only known from a few old specimens from the Kullu area in N-India. The poorly collected nature of this region is most likely responsible for the lack of more records.

BIONOMICS: The collector, H.G. Champion noted on a handwritten slip "torrent moss".

***Ochtheophilus kashmiricus* (Cameron, 1941)**

Figs 459-461, 476-480

Ancyrophorus kashmiricus Cameron, 1941: 145.

Ochtheophilus kashmiricus (Cameron). – Herman, 1970: 384.

TYPE MATERIAL EXAMINED: LECTOTYPE (here designated): "Type [red margined round disc, curator label] \ Kashmir; Gulmarg [+34.05/+74.38]; vi-vii-31; Dr. Cameron \ A.; kashmiricus; Type Cam. \ M. Cameron.; Bequest.; B.M. 1955-147.; \ Lectotypus; Ancyrophorus; kashmiricus Cameron; (on the back) des. Makranczy, 1999 \ Ochtheophilus; kashmiricus Cameron; det. Makranczy, 2004" (BMNH). – PARALECTOTYPES (6): same data as lectotype (BMNH, 4, MHNG, 1 ♂, 1 ♀).

OTHER MATERIAL: **NEPAL:** Annapurna Region, unterh. [below] Annapurna Base Camp, 3800-4000m [28°32'N, 83°54'E], 14.VI.2000, leg. J. Schmidt [in the gravel of banks of the upper Modi Khola river, collected by hand] (NHMW, 1 ♀).

REDESCRIPTION: Measurements (n=8): HW = 0.54 (0.52-0.57); TW = 0.51 (0.48-0.54); PW = 0.62 (0.60-0.66); SW = 0.78 (0.74-0.84); AW = 0.87 (0.82-0.92); HL = 0.40 (0.37-0.42); EL = 0.17 (0.15-0.18); TL = 0.10 (0.09-0.12); PL = 0.51 (0.48-0.54); SL = 0.91 (0.85-0.98); SC = 0.79 (0.74-0.84); FB = 1.90 (1.84-2.04); BL = 3.52 (3.30-3.80) mm. Body blackish dark brown, elytra sometimes lighter, dark brown. Mouthparts and antennae blackish dark brown but legs often lighter, femora yellowish medium brown, tibiae dark brown but both ends lighter, as well as tarsi. Body with greasy lustre due to more obscured punctation on head and pronotum, but distinct

coriaceous microsculpture covering interspaces; elytral setation short but rather dense. Pubescence on elytra shorter than in closest congeners but strong, rather dense and regularly spaced, in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 478. Clypeus (Fig. 476) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 477) slightly bulging, evenly curved, barely longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 479) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head shallow, more dense on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle (Fig. 480) with more coarse spiniform processes. Tergite VIII basal edge arched (more straight laterally, more arched in middle), basal sclerotized band straight on a small distance in middle; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 459. Female ringstructures as in Figs 460-461.

COMPARATIVE NOTES: Details under *O. monticola*, with remarks on the complex.

DISTRIBUTION: The species is so far known from Kashmir and Nepal.

BIONOMICS: The only existing bionomical note indicates occurrence of the species in the gravel of a riverbank.

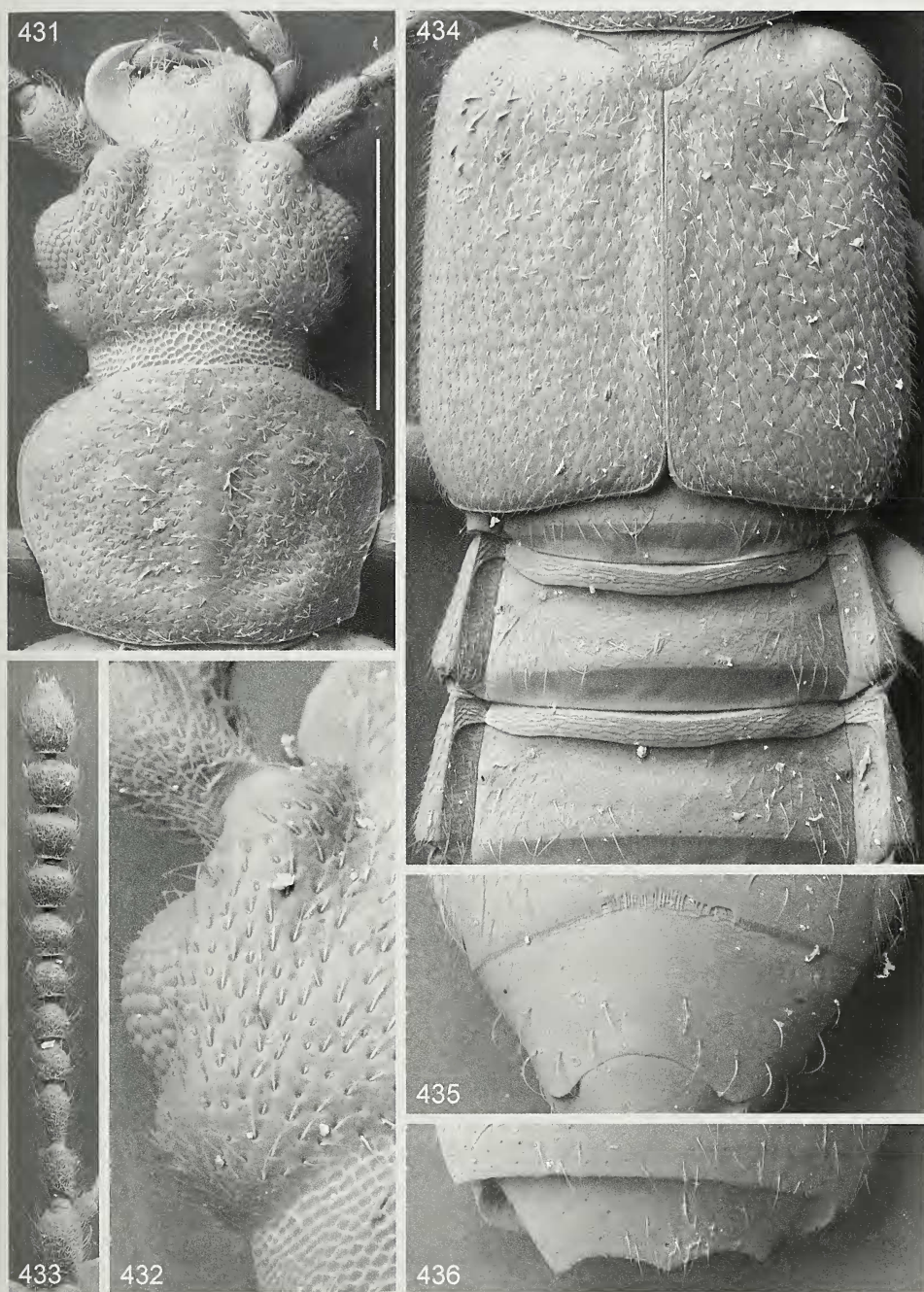
***Ochtheophilus kleebergi* sp. nov.**

Figs 486-488, 509-513

TYPE MATERIAL: HOLOTYPE (♂): "NEPAL: E-Nepal, Rolwaling Himal, Nyimare, 3300m, [27°54' N, 86°22' E], 19.V.2000, leg. A. Kleeberg [cloud forest; sifting leaf litter under wood, wet mosses]" (ZMHB). – PARATYPES (25): same data as holotype (coll. Kleeberg, 1 ♂, 3 ♀, 2, coll. Schülke, 1 ♂). – "Rolwaling Himal, umg. Nyimare, 3300m, [27°54' N, 86°22' E], 19.V.2000, leg. A. Kleeberg [cloud forest; sifting leaf litter under wood, wet mosses]" (coll. Kleeberg, 1 ♀, HNHM, 1 ♂). – "Rolwaling Himal, Rolwaling Tal, zw. Simigaon u. Nyimare, 2600m, [*+27.90/+86.27*], 17.V.2000, leg. A. Kleeberg [cloud forest; sifting leaf litter at a small creek shore]" (coll. Kleeberg, 1 ♀, HNHM, 1 ♀), same but Rolwaling Ufer, 2700m [*+27.90/+86.28*] (HNHM, 1 ♀). – "Dolakha distr., SW Kalinchok Mt., 3100m [*+27.75/+86.03*], 19-23.IV.1995, leg. Martens & Schawaller (no. 421)" (SMNS, 1 ♂). – "CHINA: YUNNAN: Dali Cangshan, ca. 2500m [*+25.60/+100.19*], 10.IV.2003, leg. G. de Rougemont, stream moss" (coll. Rougemont, OXUM, 2 ♂, 6, HNHM, 1 ♂, MHNG, 1, USNM, 1, MNHP, 1, MSNV, 1).

DESCRIPTION: Measurements (n=10): HW = 0.59 (0.57-0.61); TW = 0.54 (0.52-0.55); PW = 0.65 (0.62-0.67); SW = 0.91 (0.81-0.96); AW = 0.95 (0.80-1.04); HL = 0.46 (0.44-0.48); EL = 0.19 (0.18-0.21); TL = 0.10 (0.09-0.11); PL = 0.54 (0.52-0.57); SL = 1.09 (1.00-1.18); SC = 1.00 (0.90-1.08); FB = 2.18 (2.04-2.30); BL = 4.07 (3.50-4.40) mm. Whole body very dark brown, head darkest, almost black, elytra sometimes very slightly lighter, distinctly reddish but still dark brown, scutellar area to shoulders, narrowly along suture and a broad transversal stripe at apex black. Antennae, mouthparts and legs dark brown, antenna blackish, tarsi and both ends of tibiae occasionally somewhat lighter. On lighter specimens legs reddish medium brown but mid-tibiae remain dark brown, blackish. Body with greasy lustre due to shallow and rather fine punctation on head and pronotum, but distinct coriaceous microsculpture on interspaces everywhere; elytral punctation fine, medium deep and dense, setation dense. Pubescence on elytra rather regularly spaced and strong, in contrast with the less conspicuous but much longer setation of head and pronotum: with fine and dense setae. Abdominal tergites with setae just as strong as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anteriorly eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 511. Clypeus (Fig. 509) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples (Fig. 510) slightly bulging, evenly curved, barely longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 insignificantly concave. 'Anchor' fully formed, longitudinal mid-



FIGS 431-436

Ochtheophilus uhligi sp. n.; head and pronotum (431), side of head (432), antenna (433), elytra and base of abdomen (434), apices of tergites VII-VIII (435), apices of sternites VII-VIII (436). All SEM, dorsal views (except last, ventral). Scale bar = 0.23 mm for 432, 0.43 mm for 435-436, 0.5 mm for 431, 434, 0.62 mm for 433.

line as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 512) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head fine, more dense on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle (Fig. 513) with more coarse spiniform processes. Tergite VIII basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 486. Female ringstructures as in Figs 487-488.

ETYMOLOGY: Named after Andreas Kleeberg (Berlin, Germany), who participated in several expeditions to the Nepal Himalaya and greatly contributed to the knowledge to its fauna and was also the collector of the holotype specimen.

COMPARATIVE NOTES: Out of the large black species (outside the *O. monticola* complex) it shares the pronotal shape with *O. ritae* and *O. tichomirovae* (but different from *O. szarukani*); the shorter antenna is similar to that of *O. szarukani* (but different from that of both *O. ritae* and *O. tichomirovae*). From the remaining black species, *O. zerchei*, it is distinguishable by size.

DISTRIBUTION: Currently only known from Nepal and the Chinese province of Yunnan.

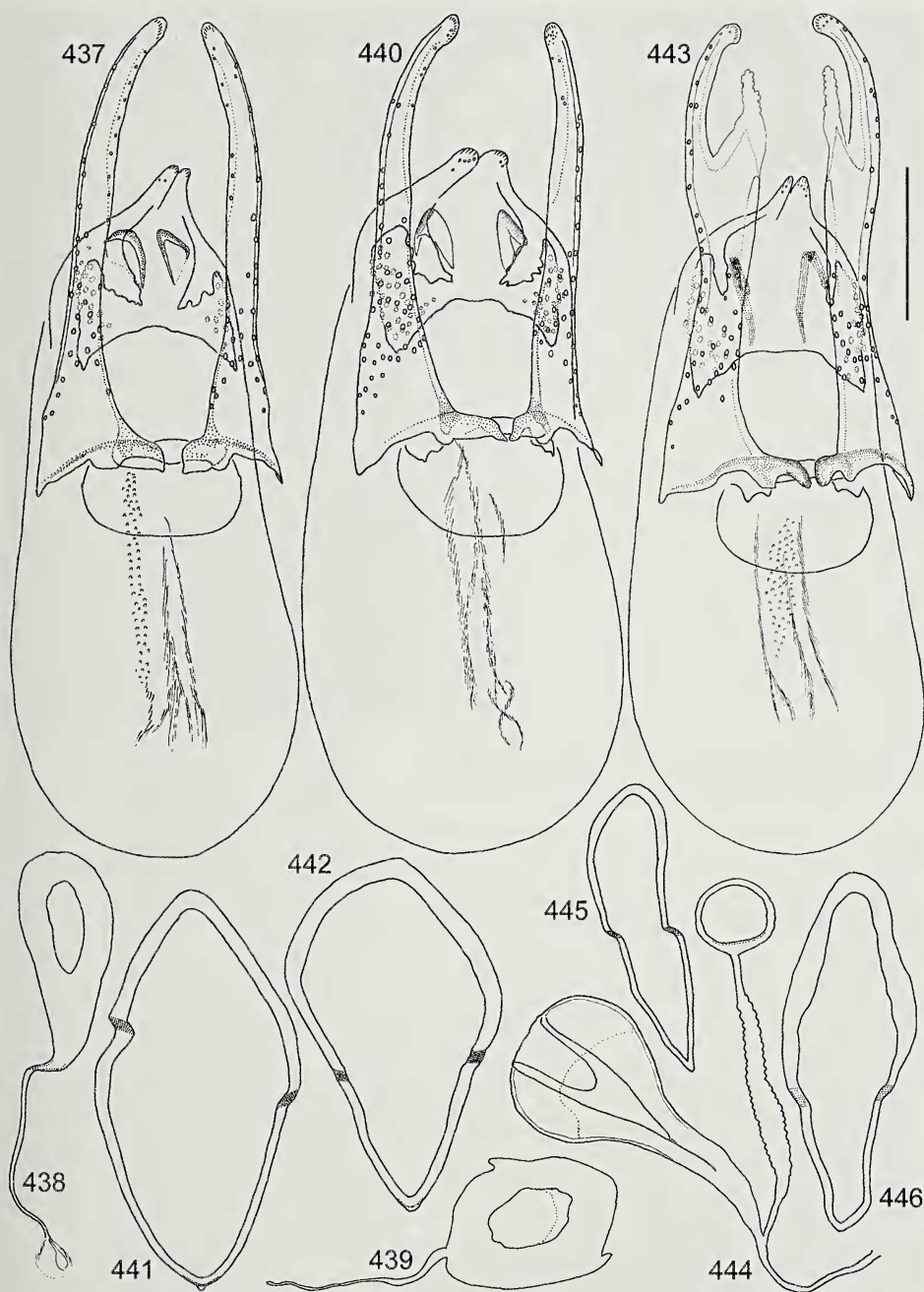
BIONOMICS: Specimens were collected at rather high elevations, ca. 2600-3300 m ("cloud forest") by sifting leaf litter under wood, wet mosses at banks of small mountain streams.

***Ochtheophilus merkli* sp. nov.**

Figs 21 483-485, 561, 564

TYPE MATERIAL: HOLOTYPE (♂): "CHINA: SICHUAN: Ya'an Prefecture, Tianquan Co., E Erlang Shan pass, 29°52.36'N, 102°17.82'E, 2900m, 20.VI.1999, leg. A. Pütz" (SDEI). – PARATYPES (10): same data as holotype (coll. Pütz, 1, MHNG, 1♂, 1♀, NHM, 1♀). – "Ya'an Prefecture, Tianquan Co., E Erlang Shan pass, 9km SE Luding, 29°52'N, 102°18'E, 2900m, 20.VI.1999, leg. M. Schülke, Bachufer, Moos + Schotter" (coll. Schülke, 3, 1♀, NHMW 1♀, NHM 1♂).

DESCRIPTION: Forebody as in Fig. 561. Measurements (n=10): HW = 0.58 (0.56-0.60); TW = 0.53 (0.50-0.55); PW = 0.63 (0.62-0.69); SW = 0.86 (0.80-0.91);



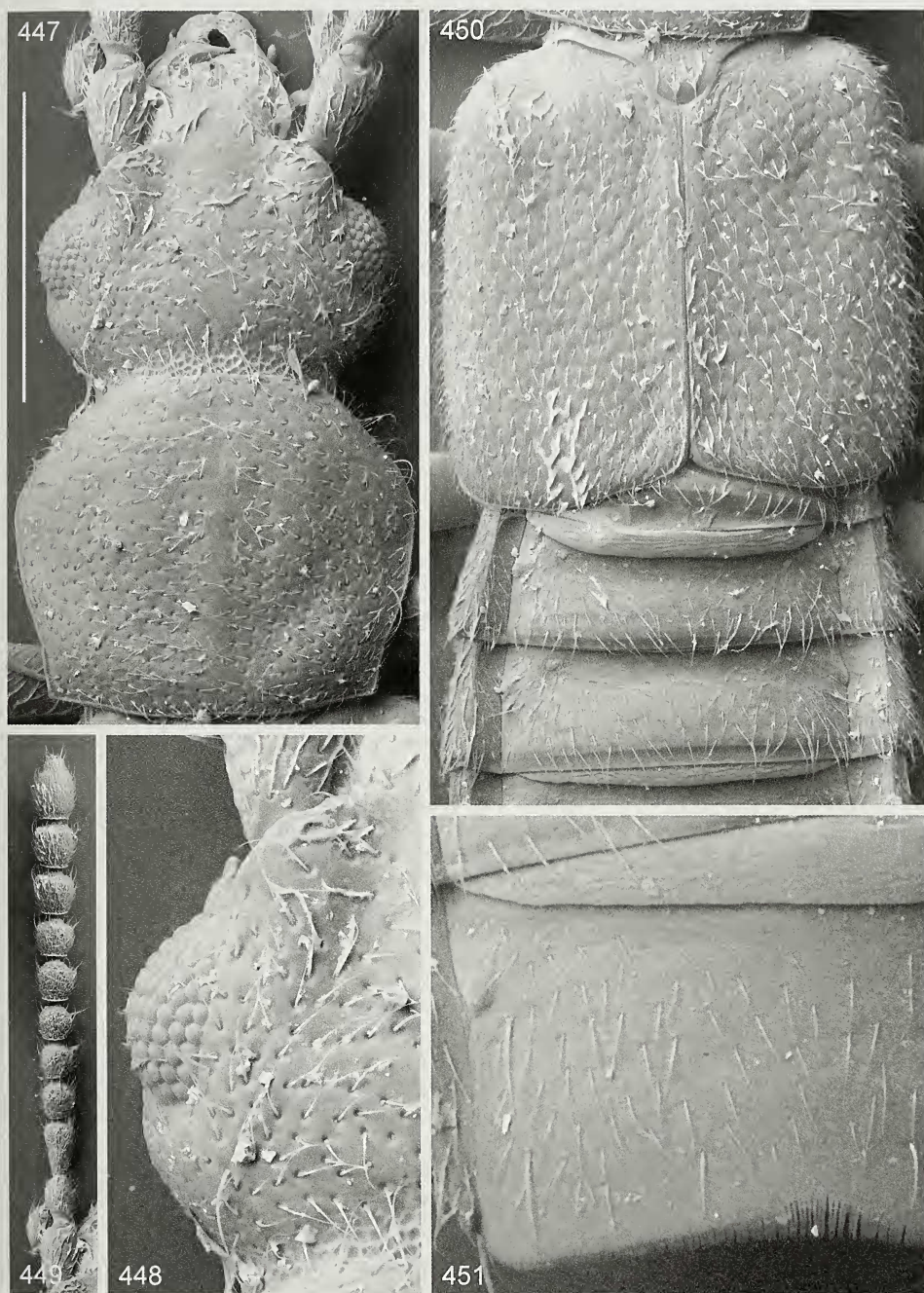
FIGS 437-446

(437-439) *Ochtheophilus vulgaris* (Watanabe & Shibata); aedeagus (437), female ringstructures (438-439). (440-442) *O. wrasei* sp. n.; aedeagus (440), female ringstructures (441-442). (443-446) *O. uhligi* sp. n.; aedeagus (443), spermatheca (444), female ringstructures (445-446). Scale bar = 0.055 mm for 438-439, 444, 0.09 mm for 431, 441-442, 0.1 mm for 440, 443, 445-446.

AW = 0.89 (0.80-1.02); HL = 0.46 (0.43-0.48); EL = 0.21 (0.20-0.22); TL = 0.09 (0.08-0.10); PL = 0.52 (0.50-0.54); SL = 1.03 (0.98-1.08); SC = 0.93 (0.90-1.00); FB = 2.07 (1.97-2.18); BL = 3.72 (3.60-3.93) mm. Head, pronotum and abdomen dark brown, head darkest, blackish. Elytra reddish medium brown, scutellar area to shoulders darker, blackish. Antenna dark brown, first antennomeres sometimes lighter. Mouthparts and legs medium to dark brown, slightly reddish. Body with greasy lustre due to rather fine and shallow punctation on head and pronotum, but distinct coriaceous microsculpture on interspaces everywhere; elytral punctation fine, shallow but rather dense. Pubescence on elytra very dense, strong and very regularly spaced, in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and dense setae. Abdominal tergites with setae finer than elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 564. Clypeus gently punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples slightly bulging, evenly curved, length usually around half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 moderately concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head dense, especially on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in



FIGS 447-451

Ochtheophilus basicornis (Cameron); head and pronotum (447), side of head (448), antenna (449), elytra and base of abdomen (450), left side of tergite VII (451). All SEM, dorsal views. Scale bar = 0.25 mm for 448, 0.3 mm for 451, 0.5 mm for 447, 0.6 mm for 450, 0.8 mm for 449.

middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 483. Female ringstructures as in Figs 484–485.

ETYMOLOGY: Named after Dr. Ottó Merkl, head curator of Coleoptera in HNHM, Budapest; the prototype of the "curator", unclouded by the vastness of the task before him, with an always alert eye watchful of what happens in the collection.

COMPARATIVE NOTES: This species is easiest to distinguish by its contrastingly light coloured (reddish) elytra from the other taxon with similar parameral shape, *O. kleebergi* (details in the key). Similarly sized and coloured species were encountered from China, but not described because of insufficient material (single females).

DISTRIBUTION: Currently only known from the Chinese province of Sichuan.

BIONOMICS: Specimens were collected at streambank, from moss and gravel.

***Ochtheophilus monticola* (Cameron, 1924)**

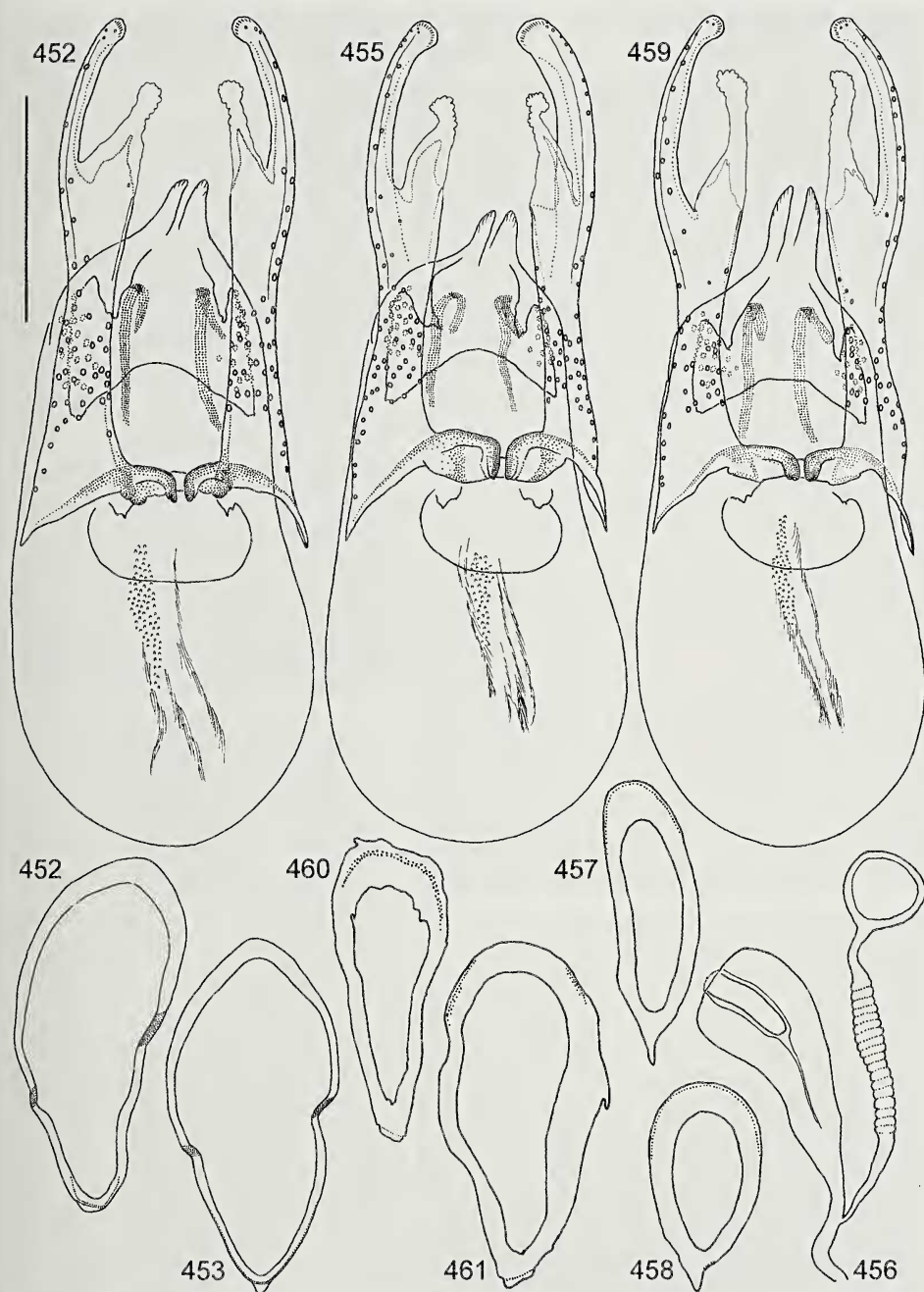
Figs 455–458, 556, 585

Ancyrophorus monticola Cameron, 1924: 174. – Cameron, 1930: 177. – Scheerpeltz, 1976: 19. *Ochtheophilus monticola* (Cameron). – Herman, 1970: 384. – Watanabe, 2007: 58.

TYPE MATERIAL EXAMINED: *Ancyrophorus monticola* – **LECTOTYPE** (here designated): "Type [red margined round disc, curator label] \ Ghum district [Darjeeling district, Ghoom, +27.02/+88.16]; v-vi-31; Dr. Cameron \ A.; basicornis; Type Cam. \ M. Cameron.; Bequest.; B.M. 1955-147.; \ Lectotypus; Ancyrophorus; basicornis Cameron; (on the back) des. Makranczy, 1999 \ Ochtheophilus; basicornis Cameron; det. Makranczy, 1999" (BMNH). – **PARALECTOTYPES** (11): same data as lectotype (BMNH, 5, coll. Last, MMUE, 5, AMNH, 1).

OTHER MATERIAL: **INDIA:** Kashmir, Hemis *+33.90/+77.72*, VI. 1981, leg. G. de Rougemont, coll. Rougemont, OXUM (1). – Kashmir, Gulmarg *+34.05/+74.38*, VI-VII.1931; [leg.] Dr. Cameron, BMNH (1). – Parbatti Valley, Kul[lu], Punjab, 6000-8000ft *+32.00/+77.44*, V.1926?, leg. H.G. Champion (BMNH, 1 ♀, 4, MHNG, 1 ♀). — **NEPAL:** Dolakha distr., SW Kalinchok Mt., 3100m *+27.75/+86.03*, 19-23.IV.1995, leg. J. Martens & W. Schawaller (no. 421), SMNS (2). – Dhawalagiri, Region Parbat, Chitre, 2500m [28°25'01"N, 83°41'52"E, sifted wet mosses], 26.V.2004, leg. A. Kleeberg, coll. Kleeberg (1 ♂). – Dhawalagiri, Region Parbat, near Chitre, Ghar Khola valley, ~2400m [28°27'36"N, 83°38'06"E], 24.V.2004, leg. A. Kleeberg [sifted organic material at bank of a tributary to Ghar Khola], coll. Kleeberg (1 ♀). – Dhawalagiri, Region Parbat, Nange Thati, 2500m [28°23'05"N, 83°42'37"E], 28.V.2004, leg. A. Kleeberg [from moss on stones in small creek], coll. Kleeberg (1 ♂), HNHM (1 ♀, 1). — **CHINA:** YUNNAN: Dali Bai Nat. Aut. Pref., Diancang Shan, 3km W Dali old town, creek valley and pine forest at "Cloud Road", right upper chairlift station, 25°41.1'N, 100°06.8'E, 2650-2750m, 29.VIII.2003, leg. M. Schülke, litter, pine needles, moss (dry and wet), mushrooms (coll. Schülke, 1 ♀).

REDESCRIPTION: Forebody as in Fig. 556. Measurements (n=10): HW = 0.63 (0.60-0.66); TW = 0.59 (0.55-0.61); PW = 0.72 (0.67-0.75); SW = 0.95 (0.90-1.00); AW = 1.00 (0.90-1.15); HL = 0.52 (0.50-0.54); EL = 0.21 (0.20-0.22); TL = 0.115 (0.105-0.125); PL = 0.60 (0.58-0.62); SL = 1.10 (1.04-1.15); SC = 1.01 (0.97-1.08); FB = 2.34 (2.26-2.44); BL = 4.42 (4.15-4.84) mm. Whole body blackish dark brown, including mouthparts and antennae; legs dark brown. Occasional lighter specimens with dark brown elytra (slightly lighter than rest of main body parts), femora medium brown except apex darker, tibiae dark brown except both ends (plus tarsi lighter, medium brown. Body with greasy lustre due to not so deep punctation on head and pro-



FIGS 452-461

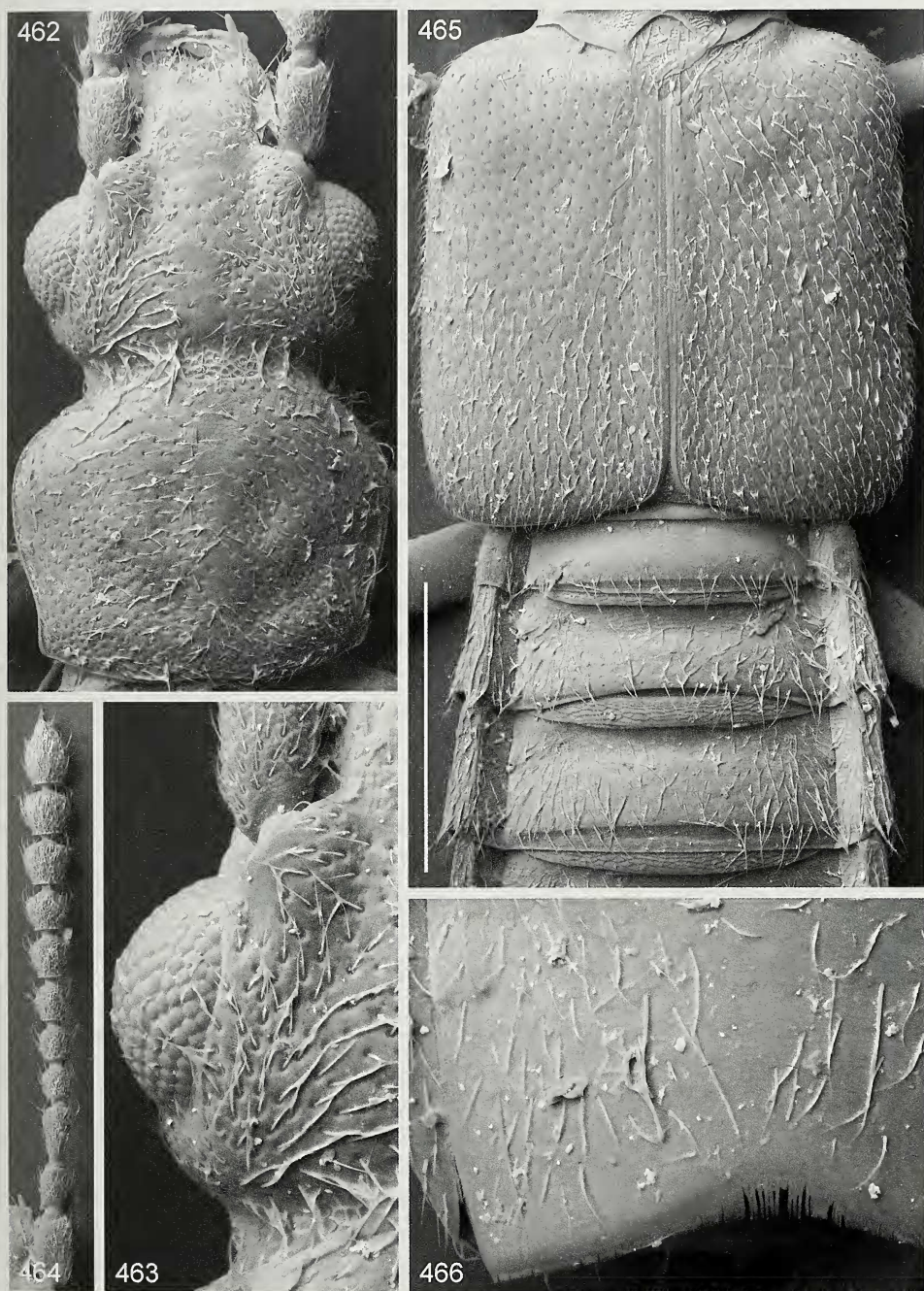
(452-454) *Ochtheophilus basicornis* (Cameron); aedeagus (452), female ringstructures (453-454). (455-458) *O. monticola* (Cameron); aedeagus (455), spermatheca (456), female ringstructures (457-458). (459-461) *O. kashmiricus* (Cameron); aedeagus (459), female ringstructures (460-461). Scale bar = 0.07 mm for 460, 0.1 mm for 456-458, 461, 0.12 mm for 452-453, 0.15 mm for 452, 459, 0.17 mm for 455.

notum, but distinct coriaceous microsculpture covering interspaces; elytral setation short but rather dense. Pubescence on elytra shorter than in closest congeners but strong, rather dense and regularly spaced, in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 585. Clypeus very finely and sparsely punctate but microsculptured trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples slightly bulging, evenly curved, barely longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head moderately sparse, more dense on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) little less than puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 455. Spermatheca as in Fig. 456, female ringstructures as in Figs 457-458.

COMPARATIVE NOTES: This species belongs to the *O. monticola* complex currently comprising 4 named species: *O. monticola*, *O. basicornis*, *O. kashmiricus* and *O. uhligi*. This assemblage is especially difficult as the male genitalia look the



FIGS 462-466

Ochtheophilus proximus (Cameron); head and pronotum (462), side of head (463), antenna (464), elytra and base of abdomen (465), left side of tergite VII (466). All SEM, dorsal views. Scale bar = 0.25 mm for 463, 466, 0.5 mm for 462, 0.6 mm for 465, 0.7 mm for 464.

same externally and have no inner sclerite. In these species the female ringstructure also looks similar, therefore delimiting species is particularly difficult. At the current state of knowledge description of more taxa is deemed undesirable. The listed quartet of species includes one with (moderately) elongate antennae (*O. monticola*) and three with shorter antenna (*O. basicornis*, *O. kashmiricus* and *O. uhligi*); two have unicolorous body with dark elytra (*O. monticola*, *O. kashmiricus*) and two have lighter, reddish elytra (*O. basicornis*, *O. uhligi*). *Ochtheophilus basicornis* has shorter elytra, often depressed on disc, temples rather long and broadly rounded. The eyes of *O. uhligi* are conspicuously bulging.

DISTRIBUTION: The species is so far known from Kashmir, N-India, Nepal and the Chinese province of Yunnan.

BIONOMICS: Specimens were collected from sifted wet moss by Andreas Kleeberg (on 26.V.2004), who made the following observations: "During sifting I have seen few rove beetles. Because the weather was nice and I wanted to see whether it is worth to continue sifting here I have examined the moss material on my white sheet. However, it was surprising, that even after waiting a fair amount of time for it to dry I could not find any beetles. Therefore, I decided to bring the material with me to my accomodation. Next day in the morning I carefully culled the moss piece by piece and finally I found the beetles. So my conclusion at that time was that the species living in these throughflow materials are well adapted to the great fluctuation of flow velocity and wetness that occurs between heavy rainfalls and drier periods in the region".

***Ochtheophilus proximus* (Cameron, 1941)**

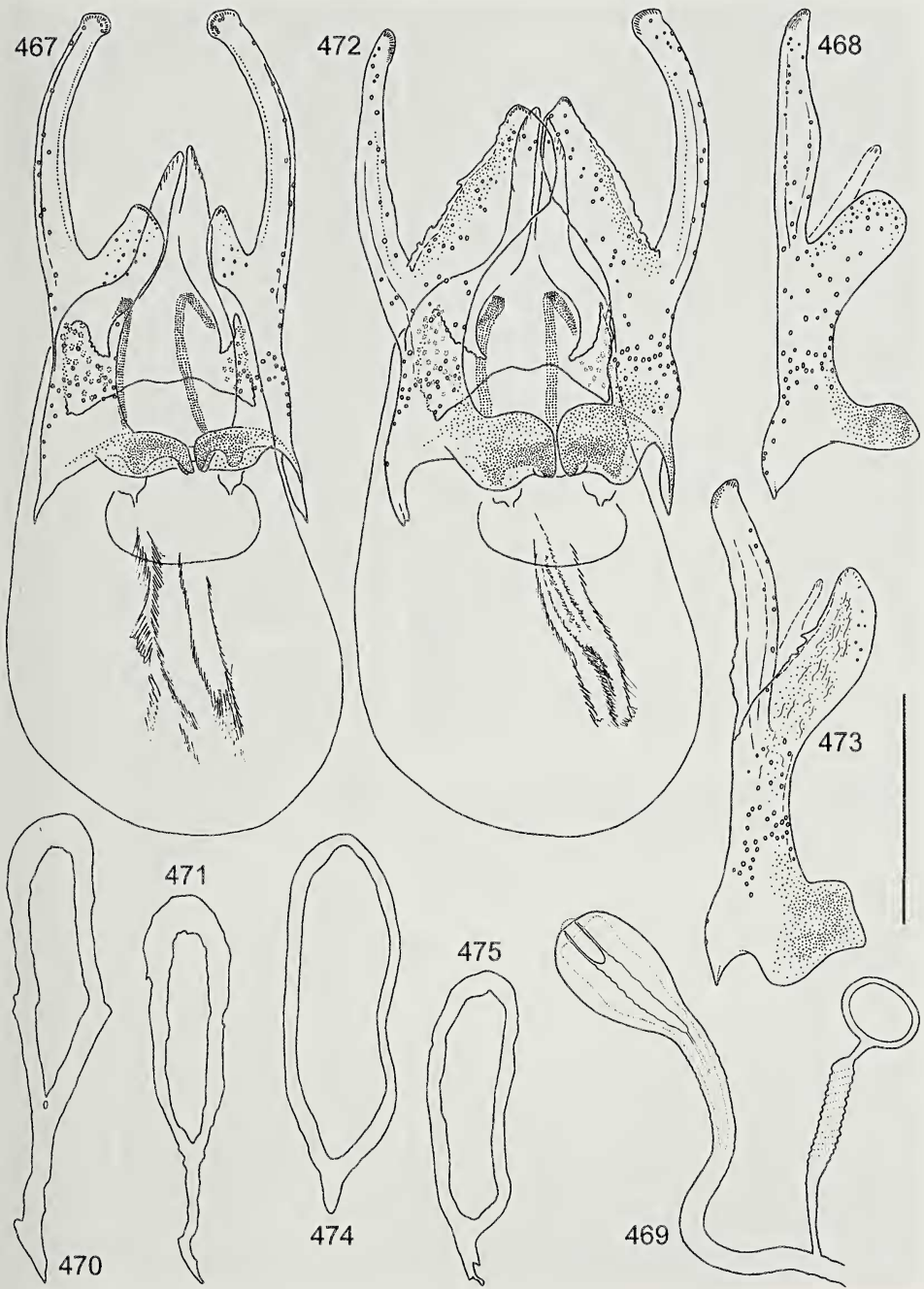
Figs 462-466, 507-508, 558

Ancyrophorus proximus Cameron, 1941: 146.

Ochtheophilus proximus (Cameron). – Herman, 1970: 385.

TYPE MATERIAL EXAMINED: *Ancyrophorus proximus* – LECTOTYPE (♀, here designated): "Type [red margined round disc, curator label] \ Ghum district [*+27.02/+88.16*]; v-vi-31; Dr. Cameron \ A.; proximus; Type Cam. \ M. Cameron.; Bequest.; B.M. 1955-147.; \ Lectotypus; Ancyrophorus; proximus Cameron; [on the back] des. Makranczy, 1999 \ Ochtheophilus; proximus Cameron; det. Makranczy, 1999" (BMNH). – PARALECTOTYPE (1): same data as lectotype (BMNH, 1 ♀).

REDESCRIPTION: Forebody as in Fig. 558. Measurements (n=2): HW = 0.65 (0.64-0.66); TW = 0.57 (0.58-0.56); PW = 0.69 (0.68-0.69); SW = 0.90 (0.90-0.90); AW = 0.92 (0.94-0.90); HL = 0.43 (0.42-0.44); EL = 0.22 (0.22-0.22); TL = 0.10 (0.10-0.10); PL = 0.56 (0.56-0.56); SL = 1.00 (0.98-1.02); SC = 0.91 (0.90-0.92); FB = 2.11 (2.10-2.12); BL = 3.80 (3.60-4.00) mm. Body uniformly blackish dark brown, legs dark brown except tarsi, both ends of tibiae and mouthparts somewhat lighter, more or less medium brown. Most of antennae also dark brown, basal antennomeres occasionally a tiny bit lighter. Medium shiny with some more lustrous parts. Pubescence rather fine and moderately dense, shorter and regularly spaced on elytra, abdominal tergites with longer setae, especially at apices of tergites. Head antieriad eyes and near inner posterior margin of eye with stronger and darker bristles, as well as pronotal margin and middle of tibiae. Elytra without conspicuous setae at the apical edge near the sutural corners. Last tarsomere with a few setae only.



FIGS 467-475

(467-471) *Ochtheophilus tichomirovae* sp. n.; aedeagus (467), paramere in side view (468), spermatheca (469), female ringstructures (470-471). (472-475) *O. ritae* sp. n.; aedeagus (472), paramere in side view (473), female ringstructures (474-475). Scale bar = 0.08 mm for 470-471, 474-475, 0.1 mm for 469, 0.2 mm for 467-468, 472-473.

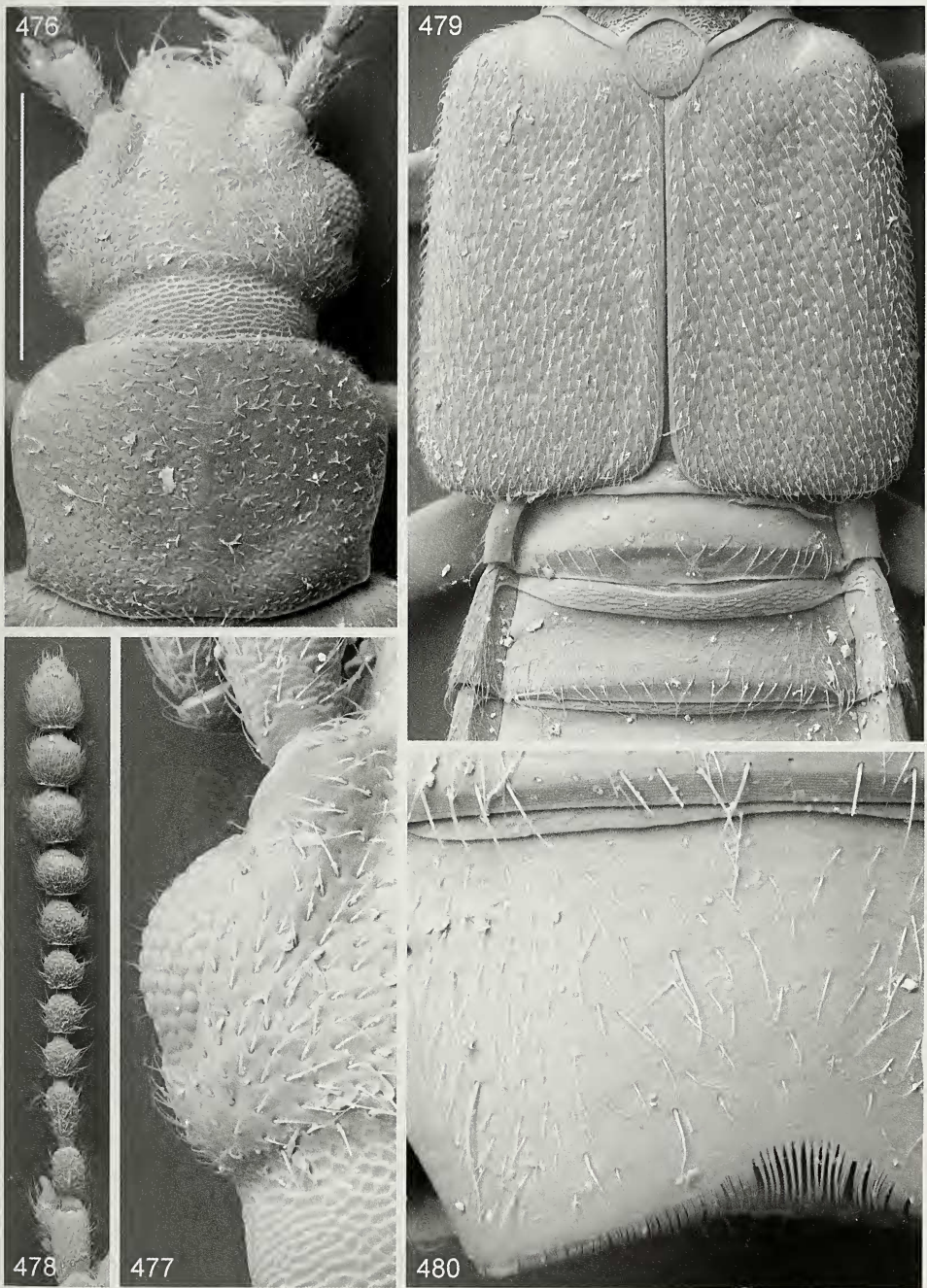
Forebody. Antenna as in Fig. 464. Clypeus (Fig. 462) sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed, shinier transversal line (frontoclypeal suture). Supraantennal prominences moderately well developed, separated from clypeus/vertex by moderately deep longitudinal impressions. Vertex has two extremely shallow impressions (at the sides of the center of midline), center rather shiny. Temple (Fig. 463) barely bulging, evenly curved, little shorter than half of eye length. Neck separated by a weakly impressed transversal groove, very strong areolate microsculpture, with more or less isodiametric cells, no setation. Pronotum with a narrow marginal bead, getting invisible anteriorly with pronotal corners strongly curved in ventral direction, inconspicuous on anterior margin. Posterior pronotal angles well-formed, but rather obtuse-angled, sides in posterior 1/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, a feeble cross-elevation at 3/5 of the broad midline continuing curved anteriorly. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 465) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides very slightly oblique and slightly, evenly arched (convex). Elytral surface with two rather strong, oval impressions behind scutellum. Head and pronotum with almost indistinct coriaceous microsculpture, faded for the most part, only apparent on sides of head and more impressed areas and sides of pronotum; clypeus, however, with distinct colliculate microsculpture. The punctation on the head and pronotum variously sparse, on the shinier centre the interspaces larger than puncture diameters, towards sides 1/2 of puncture diameters. Elytra with distinct, regularly spaced but not particularly coarse punctation, puncture sizes nearly equal to interspaces; on the surface between the punctures microsculpture only slightly apparent.

Abdomen. Compared to forebody, abdomen with finer, less distinct punctation, microsculpture fine coriaceous with moderately transverse cells, more apparent on bases and towards laterosternites. Tergite VII posterior margin with palisade fringe broadened in middle (Fig. 466) with 10-12 more coarse spiniform processes. Tergite VIII basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in females shallowly concave laterally, gently sinuate in middle; in males unknown. Tergite X unmodified, apex broadly rounded in females. Female ringstructures as in Figs 507-508.

COMPARATIVE NOTES: The placement of this species – in absence of a male specimen – is rather problematic. It is tentatively placed in the *O. monticola* group, although the female ringstructure in the *O. wrasei* group is also similar.

DISTRIBUTION: The species is only known from its original type material from northern India (Darjeeling district).

BIONOMICS: There is no bionomical information on the labels.



FIGS 476-480

Ochtheophilus kashmiricus (Cameron); head and pronotum (476), side of head (477), antenna (478), elytra and base of abdomen (479), left side of tergite VII (480). All SEM, dorsal views. Scale bar = 0.28 mm for 477, 480, 0.42 mm for 476, 0.5 mm for 478-479.

Ochtheophilus ritae sp. nov.

Figs 472-475, 481

TYPE MATERIAL: HOLOTYPE (♂): “**INDIA**: Uttarakhand: 10km NE Govind Ghat [Gobindghat] (road to Ghangaria), Bhuinder Ganga river (30.687° N, 079.589° E), 11-12.VI.2011, leg. A. Shavrin, under large stones near the river” (MHNG). – PARATYPES (23): same data as holotype (coll. Shavrin, 1♂, 2, HNHM, 1♂, 1♀, SDEI, 1, CNCI, 1, NHMW, 1, NKME, 1, BMNH, 1, AMNH, 1, FMNH, 1, SMNS, 1, USNM, 1, SEMC, 1, ISNB, 1, MNHP, 1). – “**NEPAL**: E-Nepal, Rolwaling Himal, Rolwaling Tal, Nyimare, 3300m [27°54'N, 86°22'E], 19.V.2000, leg. A. Kleeberg [cloud forest; sifting leaf litter under wood, wet mosses]” (coll. Kleeberg, 1♂, HNHM, 1♂). – “E-Nepal, Rolwaling Himal, Rolwaling Ufer, zw. Simigaon u. Nyimare, 2700m, [*+27.90/+86.28*], 17.V.2000, leg. A. Kleeberg [cloud forest; sifting leaf litter at a small creek shore]” (coll. Kleeberg, 1♀, HNHM, 1♀). – “Nepal, Himal., Annapurna Mts., NE Pokhara, Madi Khola Tal, Hogokh [Hog goth], 1900m, [*+28.42/+84.11*], 4.V.1996, leg. Schmidt & Jäger” (SMTD, 1♂). – “**CHINA**: SICHUAN: Gongga Shan, Hailuoguo Glaciary Park, Camp no. 3, 2600-3200m [29°35'00"N, 102°02'20"E], 16-18.VII.2006, leg. T. Tichý” (coll. Schülke, 1♂).

DESCRIPTION: Habitus as in Fig. 481. Measurements (n=10): HW = 0.64 (0.59-0.70); TW = 0.59 (0.55-0.65); PW = 0.74 (0.68-0.82); SW = 1.00 (0.92-1.07); AW = 1.05 (0.98-1.13); HL = 0.51 (0.48-0.57); EL = 0.21 (0.20-0.22); TL = 0.12 (0.10-0.14); PL = 0.60 (0.54-0.67); SL = 1.16 (1.06-1.29); SC = 1.05 (0.95-1.17); FB = 2.38 (2.19-2.67); BL = 4.26 (3.60-4.69) mm. Whole body very dark brown, head darkest, almost black, elytra sometimes very slightly lighter but still dark brown, scutellar area to shoulders black. Antennae, mouthparts and legs dark brown, antenna blackish, tarsi and both ends of tibiae occasionally somewhat lighter. Body with greasy lustre due to rather fine and shallow punctation on head and pronotum, but distinct coriaceous microsculpture on interspaces everywhere; elytral punctation fine, shallow but rather dense. Pubescence on elytra short, medium strong and regularly spaced, in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and dense setae. Abdominal tergites with setae just as strong as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 481. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples slightly bulging, evenly curved, barely longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/2 insignificantly concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly



FIGS 481-482

Habitus of *Ochtheophilus* species. *O. ritae* sp. n. (481), *O. tichomirovae* sp. n. (482).

rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head fine and moderately dense, more so on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) slightly larger than puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 472, paramere from side view as in Fig. 473. Female ringstructures as in Figs 474-475.

ETYMOLOGY: This species is named after Rita Földesi, who had a lot of sympathy towards me during my first attempt to wrap this project up (and ever since).

COMPARATIVE NOTES: From the most closely related species, *O. tichomirovae*, it is virtually indistinguishable externally (Figs 481, 482), but can be separated by examination of the genitalia (details in the key). Another large black species is *O. szarukani*, with a slightly different pronotal shape (in dorsal view marginal bead can be seen at anterior corners), and a somewhat shorter antenna (articles 9-10 usually not elongate, often very slightly transverse), this latter feature is shared with *O. kleebergi*, but the latter species (Fig. 509) has pronotal shape like *O. ritae* and *O. tichomirovae*. From the other black species outside the *O. monticola* complex, *O. zerchei*, it is distinguishable by size.

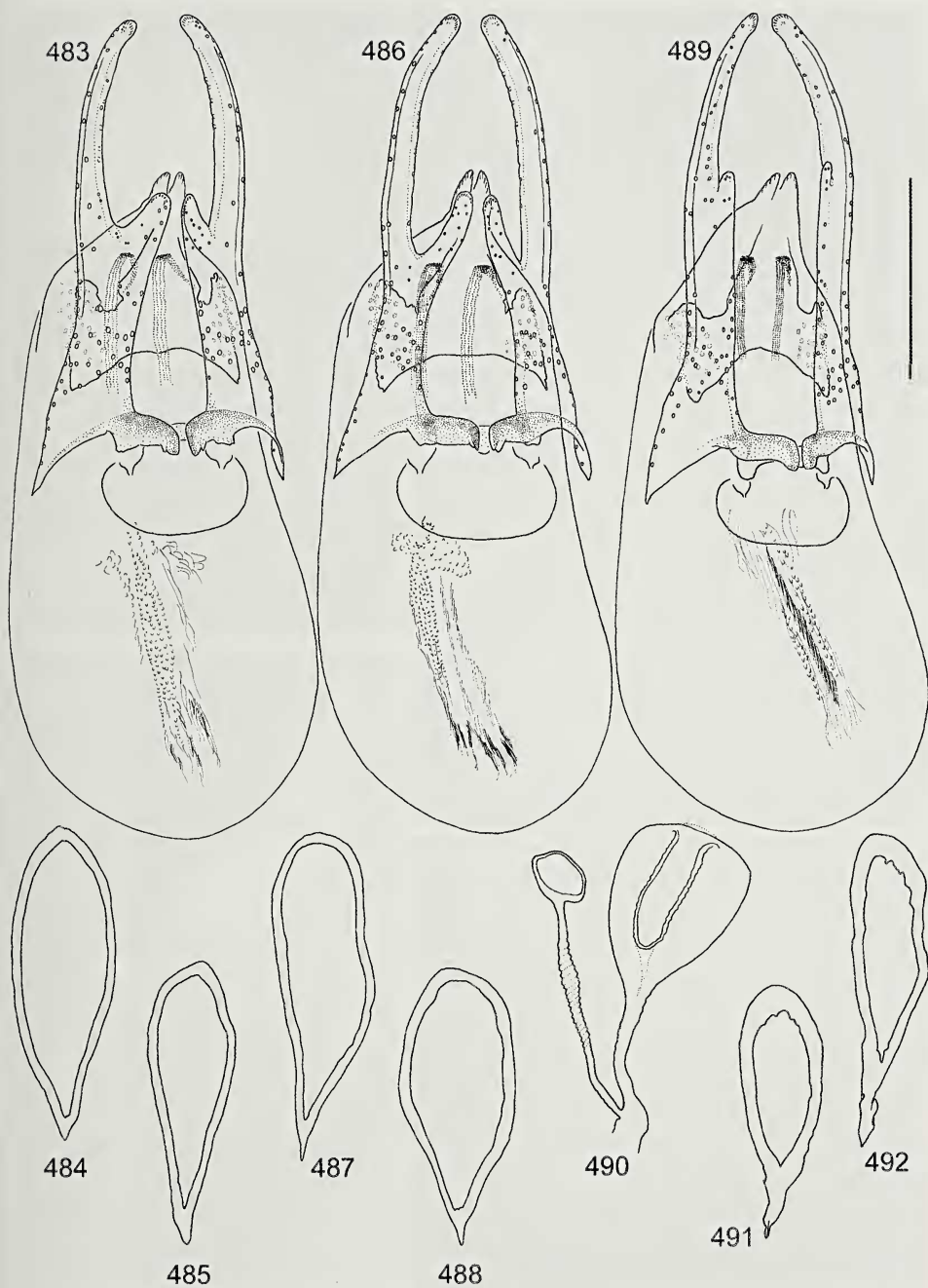
DISTRIBUTION: Currently known from N-India, Nepal and the Chinese province of Sichuan.

BIONOMICS: Specimens were collected from under large stones at a riverbank, sifting leaf litter (under wood) at a small creek shore, also from wet mosses.

Ochtheophilus szarukani sp. nov.

Figs 22, 489-492, 560, 586

TYPE MATERIAL: HOLOTYPE (♂): "CHINA: SICHUAN: Ya'an Prefecture, Tianquan Co., E Erlang Shan pass, 29°52.36'N, 102°17.82'E, 2900m, 20.VI.1999, leg. A. Pütz" (SDEI). – PARATYPES (38): same data as holotype (coll. Pütz, 7, MHNG, 1, AMNH, 1, BMNH, 1, FMNH, 1, SEMC, 1, SMNS, 1, ISNB, 1, CNCI, 1, USNM, 1, MNHP, 1, NHMW, 1). – "Ya'an Prefecture, Tianquan Co., E Erlang Shan pass, 9km SE Luding, 29°52'N, 102°18'E, 2900m, 20.VI.1999, leg. M. Schülke, Bachufer, Moos + Schotter" (coll. Schülke, 3♂, 2♀, 7, HHNM 1♂, 4). – "Erlang Shan, East side 3km below pass, 29°52'N, 102°17'E, ca. 3000m, 19.V.1997, leg. A. Pütz, sifted" (coll. Pütz, 1♂). – "Emei Shan, 3000m, 29°32'N, 103°21'E, 17.VII.1996, leg. A. Smetana, J. Farkač & P. Kabátek (C64), sifting moist to wet moss and debris among low shrubbery" (coll. Smetana, 1♂).



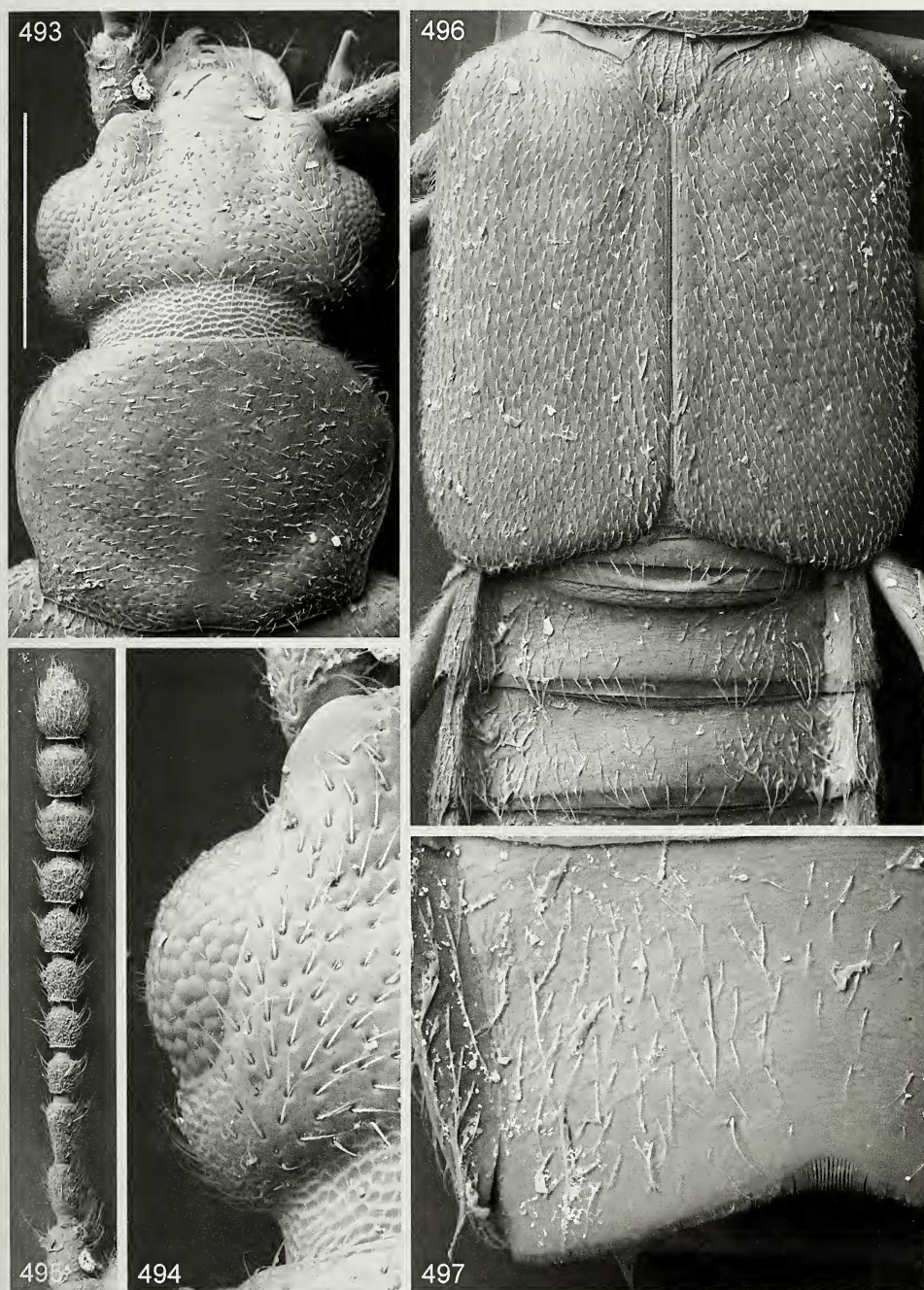
FIGS 483-492

(483-485) *Ochtheophilus merkli* sp. n.; aedeagus (483), female ringstructures (484-485).
 (486-488) *O. kleebergi* sp. n.; aedeagus (486), female ringstructures (487-488). (489-492)
O. szarukani sp. n.; aedeagus (489), spermatheca (490), female ringstructures (491-492). Scale
 bar = 0.07 mm for 487-488, 490, 0.1 mm for 491-492, 0.14 mm for 483-486, 0.17 mm for 489.

DESCRIPTION: Forebody as in Fig. 560. Measurements (n=10): HW = 0.66 (0.64-0.68); TW = 0.60 (0.57-0.61); PW = 0.74 (0.69-0.79); SW = 1.02 (0.95-1.07); AW = 1.08 (1.01-1.19); HL = 0.51 (0.48-0.55); EL = 0.24 (0.23-0.25); TL = 0.105 (0.10-0.11); PL = 0.61 (0.57-0.63); SL = 1.16 (1.10-1.20); SC = 1.04 (0.98-1.08); FB = 2.36 (2.22-2.44); BL = 4.41 (4.02-4.79) mm. Whole body very dark brown, head darkest, almost black, elytra sometimes very slightly lighter but still dark brown, scutellar area to shoulders black. Antennae, mouthparts and legs dark brown, antenna blackish, tarsi and both ends of tibiae occasionally somewhat lighter. Body with greasy lustre due to shallow and very fine punctation on head and pronotum, but distinct and dense coriaceous microsculpture on interspaces everywhere; elytral punctation fine, shallow but dense, setation more dense than is closest congeners. Pubescence on elytra very dense, strong and very regularly spaced, in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and dense setae. Abdominal tergites with setae finer than elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anteriorly eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 586. Clypeus sparsely punctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples slightly bulging, evenly curved, little shorter than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with stronger coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctation on head fine, more dense on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, without



FIGS 493-497

Ochtheophilus indicus sp. n.; head and pronotum (493), side of head (494), antenna (495), elytra and base of abdomen (496), left side of tergite VII (497). All SEM, dorsal views. Scale bar = 0.17 mm for 494, 0.2 mm for 497, 0.4 mm for 493, 0.45 mm for 496, 0.5 mm for 495.

concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 489. Spermatheca as in Fig. 490, female ringstructures as in Figs 491-492.

ETYMOLOGY: The species is named after Dr. István Szarukán, professor at the University of Debrecen, my teacher of applied entomology when it was still Agricultural University and one of the key figures in my starting a career in Entomology.

COMPARATIVE NOTES: From the similarly large black species (the pair of *O. ritae* and *O. tichomirovae*, plus *O. kleebergi*) it can be separated by its different pronotal shape (similar to that of *O. indicus* in Fig. 493). From the other black species outside the *O. monticola* complex, *O. zerchei*, it is distinguishable by size.

DISTRIBUTION: All known specimens are from the Chinese province of Sichuan.

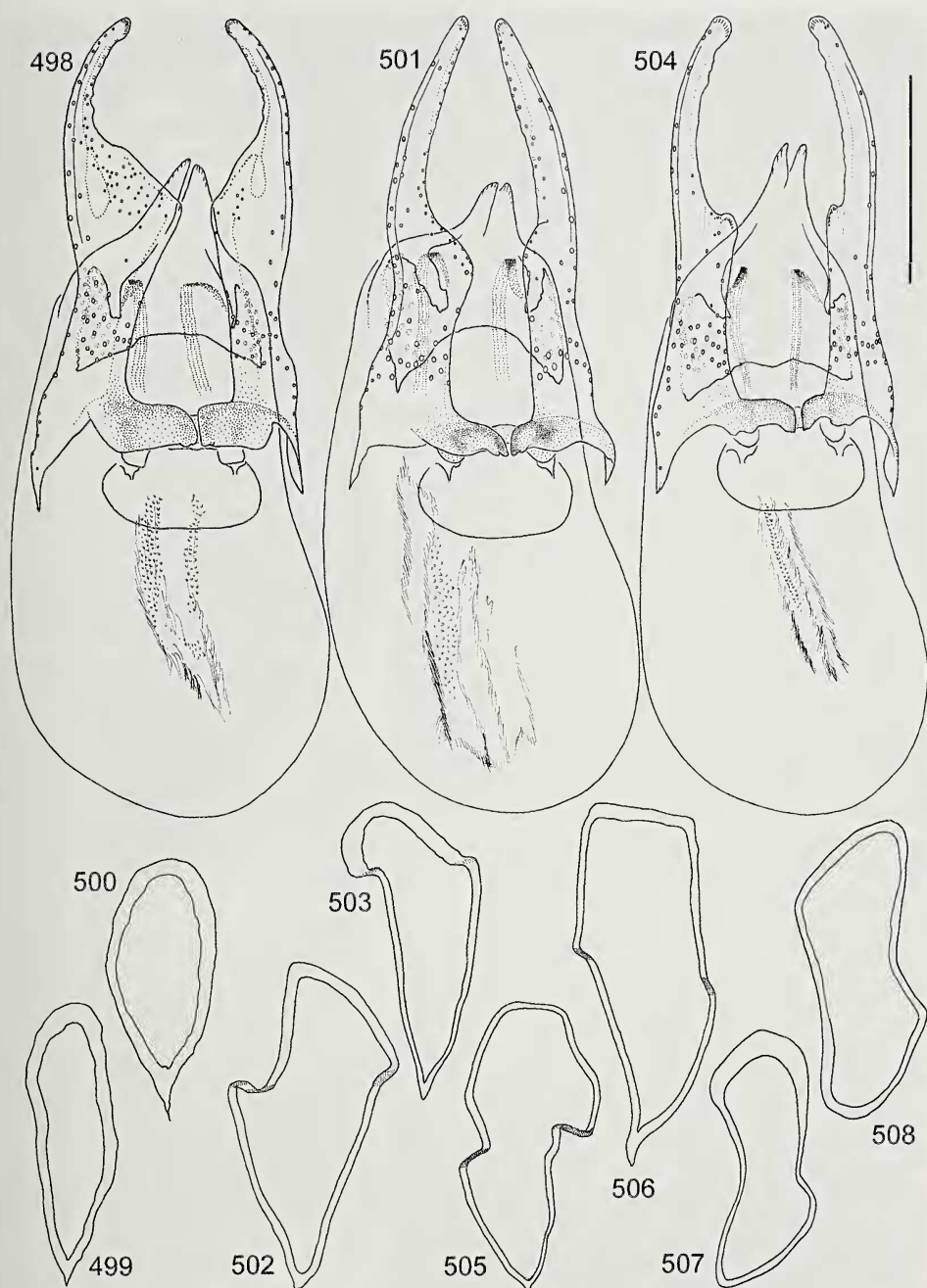
BIONOMICS: Specimens were collected at streambank, from moss and gravel, also by sifting moist to wet moss and debris among low shrubbery.

***Ochtheophilus tichomirovae* sp. nov.**

Figs 467-471, 482

TYPE MATERIAL: HOLOTYPE (♂): “**N-INDIA:** Uttarakhand, Uttarkashi district, left tributary of Bhagirathi River, near Dharali, 31°20.28'N, 078°47.70'E, 2579 m, 16.IV.2012, leg. A. V. Shavrin, under stones near river” (MHNG). – PARATYPES (29): same data as holotype (coll. Shavrin, 2). – “Kashmir, Gulmarg [$+34.05/+74.38^*$], VI-VII.1931, leg. M. Cameron” (BMNH, 2♂). – “Kashmir, Gulmarg, 8000-9000ft [$+34.05/+74.38^*$], VI-VII.1931, leg. M. Cameron” (BMNH, 1). – “Himachal Pradesh, Naggar Nala, Bach im Kullu-tal, 31°27'N, 76°56'E, ca. 1600m, 11.VI.1997, leg. A. Panesar, Emergenzfalle” (SDEI, 1♂). – “**PAKISTAN:** North-West Frontier province, Hazara, Upper Kagan Valley, Naddi [Bangla], 8000ft [$+34.64/+73.33^*$], 11.VI.1927, leg. H.G. Champion” (coll. Champion, BMNH, 2♂, 2♀). – “**NEPAL:** Annapurna Region, unterh. [below] Annapurna Base Camp, 3800-4000m [28°32'N, 83°54'E], 14.VI.2000, leg. J. Schmidt [in the gravel of banks of the upper Modi Khola river, collected by hand]” (MHNG, 1♀). – “**CHINA:** YUNNAN: 50km N Lijiang, Yulongshan National Forest Park [SE of Dazu (Daju) Co. $+27.27/+100.29$], 24-29.VI.1993, leg. E. Jendek & O. Sausa” (NHMW, 2♂, 1♀, ISNB, 1). – “**SICHUAN:** Ganzi pref., Daxue Shan, 5km E Kangding, river valley, 30°03'N, 102°00'E, ca. 3000m, 20/23.V.1997, leg. A. Pütz” (coll. Pütz, 2♂, 2♀, HNHM, 2♂, FMNH, 1, SMNS, 1, AMNH, 1, CNCI, 1). – “Daxue Shan, Bachtal 5km E Kangding, 30°03'28"N, 102°00'15"E, 2500-2800m, 20.V.1997, leg. M. Schülke (4)” (coll. Schülke, 1♂, 2♀). – “Ya'an pref., Shimian Co., Xiaoxiang Ling, side valley ab. Nanya Cun nr. Caluo, 11km S Simian, 1250m [$+29.14/+102.37^*$], 7.VII.1999, leg. A. Pütz” (coll. Pütz, 1♀).

DESCRIPTION: Habitus as in Fig. 482. Measurements (n=10): HW = 0.64 (0.62-0.68); TW = 0.60 (0.57-0.63); PW = 0.74 (0.70-0.78); SW = 1.02 (0.94-1.06); AW = 1.06 (1.00-1.14); HL = 0.51 (0.46-0.54); EL = 0.20 (0.19-0.22); TL = 0.11 (0.10-0.13); PL = 0.61 (0.58-0.64); SL = 1.18 (1.10-1.23); SC = 1.04 (0.98-1.08); FB = 2.42 (2.26-2.56); BL = 4.54 (3.96-4.86) mm. Whole body very dark brown, head darkest, almost black, elytra sometimes very slightly lighter but still dark brown, scutellar area to shoulders black. Antennae, mouthparts and legs dark brown, antenna blackish, tarsi and both ends of tibiae occasionally somewhat lighter. Body with greasy lustre due to rather fine and shallow punctuation on head and pronotum, but distinct coriaceous



FIGS 498-508

(498-500) *Ochtheophilus zerchei* sp. n.; aedeagus (498), female ringstructures (499-500). (501-503) *O. assingi* sp. n.; aedeagus (501), female ringstructures (502-503). (504-506) *O. indicus* sp. n.; aedeagus (504), female ringstructures (505-506). (507-508) *O. proximus* (Cameron), female ringstructures. Scale bar = 0.09 mm for 505-506, 0.1 mm for 499-500, 502-503, 507-508, 0.14 mm for 501, 504, 0.16 mm for 498.

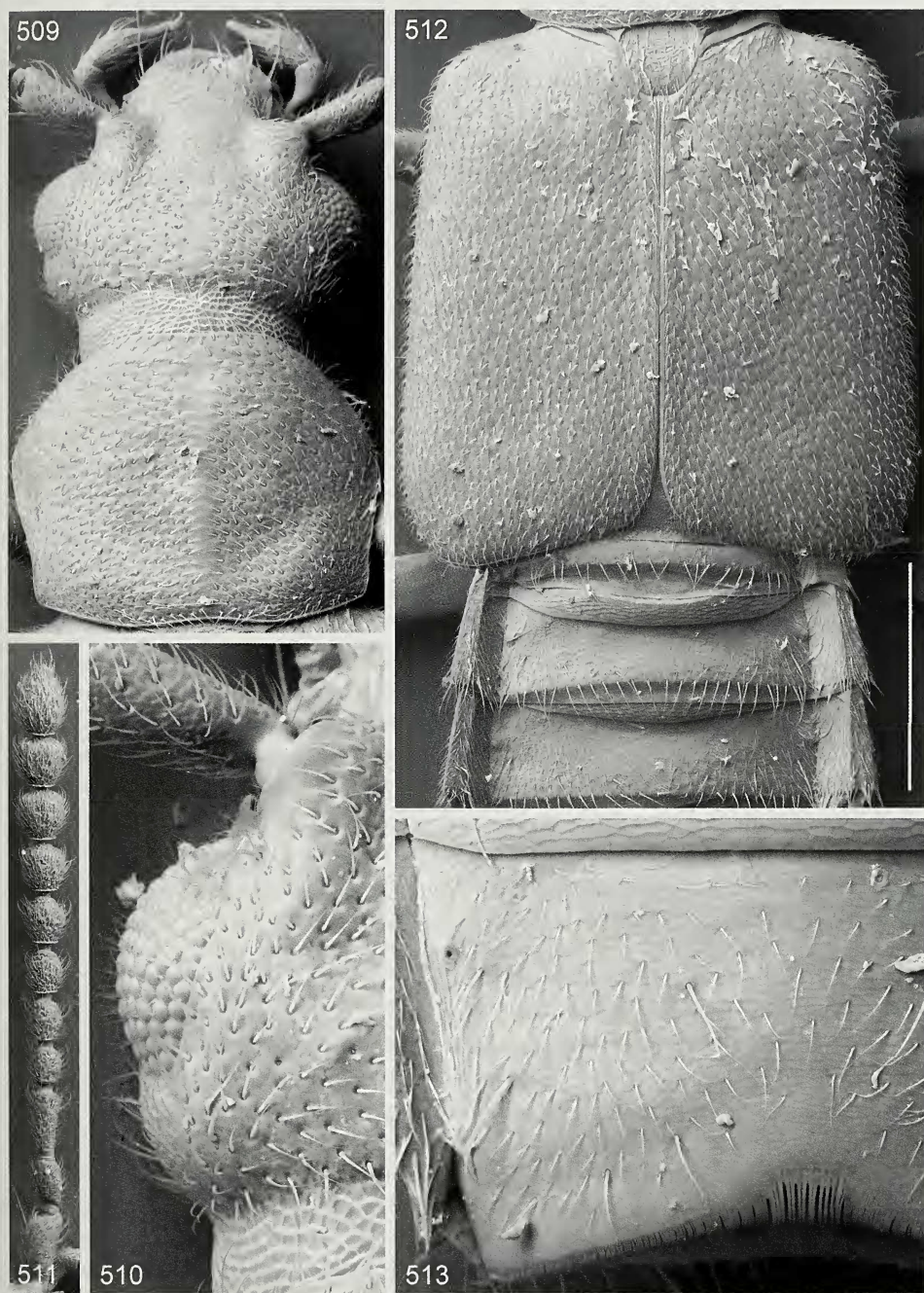
microsculpture on interspaces everywhere; elytral punctation fine, shallow but rather dense. Pubescence on elytra short, strong and regularly spaced, in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and dense setae. Abdominal tergites with setae finer than elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 482. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Vertex with two oblique impressions almost joining in a v-shape in the middle; midlongitudinal line very slightly elevated. Temples slightly bulging, evenly curved, barely longer than half of eye length. Neck separated by a gently impressed line differing by lack of setation and punctation but with similarly strong microsculpture. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head and pronotum with strong coriaceous microsculpture providing a greasy lustre. Punctation very deep and pronounced, interspaces slightly less than diameters. Elytra with twice as coarse punctation but with indistinct microsculpture, as a result elytra much more shiny.

Abdomen. Compared to forebody, abdomen with much more sparse, shallow, less distinct punctation except basal ridge and a narrow transversal furrow posteriad, not too strong coriaceous microsculpture. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 467, paramere from side view as in Fig. 468. Spermatheca as in Fig. 469, female ringstructures as in Figs 470-471.

ETYMOLOGY: The species is named after Anna L. Tichomirova, one of very few female staphylinidologists who had great influence despite her short life.

COMPARATIVE NOTES: From the most closely related species, *O. ritae*, it is virtually indistinguishable externally, but the two have different genitalia. The features separating *O. tichomirovae* from *O. szarukani* and *O. kleebergi* are listed under



FIGS 509-513

Ochtheophilus kleebergi sp. n.; head and pronotum (509), side of head (510), antenna (511), elytra and base of abdomen (512), left side of tergite VII (513). All SEM, dorsal views. Scale bar = 0.17 mm for 510, 0.19 mm for 513, 0.4 mm for 509, 0.5 mm for 511-512.

O. ritae. From the other black species outside the *O. monticola* complex, *O. zerchei*, it is distinguishable by size.

DISTRIBUTION: Known from Kashmir, N-India, Nepal and the Chinese provinces of Sichuan and Yunnan.

BIONOMICS: Specimens were collected from under stones at riverbank, gravel-bank of river.

***Ochtheophilus uhligi* sp. nov.**

Figs 431-436, 443-446

TYPE MATERIAL: HOLOTYPE (♂): "CHINA: W-HUBEI (Daba Shan), mountain range NE Muyuping, pass 12km Muyuping, 2380m, 31°32'N, 110°26'E, 17.VII.2001, leg. M. Schülke [C01-15], N pass, N-slope with young deciduous forest, bank of small creek, moss (sifted)" (ZMHB). – PARATYPES (5): same data as holotype (coll. Schülke, 1♂, 1♀, 1, MHNG, 1, NHMW, 1).

OTHER MATERIAL: **NEPAL:** prov. Bagmati, below Thare Pati, 3300m [*+28.08/+85.54*], leg. I. Löbl & A. Smetana (16B), tamisage de mousses et de feuilles mortes d'érables au pied des roches, près d'un ruisseau (MHNG, 1♀).

DESCRIPTION: Measurements (n=6): HW = 0.59 (0.57-0.61); TW = 0.56 (0.53-0.58); PW = 0.67 (0.66-0.69); SW = 0.78 (0.77-0.80); AW = 0.94 (0.91-0.97); HL = 0.44 (0.41-0.47); EL = 0.16 (0.15-0.17); TL = 0.13 (0.12-0.14); PL = 0.53 (0.51-0.55); SL = 0.87 (0.83-0.91); SC = 0.79 (0.76-0.82); FB = 1.93 (1.83-2.00); BL = 3.88 (3.73-4.30) mm (Nepal specimen: HW = 0.65; TW = 0.62; PW = 0.73; SW = 0.88; AW = 1.05; HL = 0.50; EL = 0.22; TL = 0.13; PL = 0.55; SL = 1.03; SC = 0.95; FB = 2.13; BL = 4.13 mm). Head, pronotum and abdomen blackish dark brown. Elytra reddish medium to dark brown but scutellar area to shoulders darker, blackish. Legs reddish medium brown, but mid-tibiae and femora often darker. Antennae and mouthparts slightly reddish dark brown. Body with somewhat greasy lustre in spite of deep punctation on head and pronotum, but indistinct coriaceous microsculpture on most of head and more elevated (shinier) parts of pronotum; elytral punctation deep, surface uneven and setation strong, longer than in closest congeners. Pubescence on elytra regularly spaced, moderately strong and dense, in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and moderately dense setae. Abdominal tergites with setae just as thick as elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anteriad eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex without conspicuous setae. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 433. Clypeus (Fig. 431) almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supraantennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with only very slight impressions on both sides. Temples (Fig. 432) slightly bulging, evenly curved, little longer than half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction.

Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra (Fig. 434) slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head moderately dense and rather rough, more so on posterior part and sides, on pronotum more evenly spaced, average interspaces much larger than puncture diameters; elytral punctuation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctuation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII (Fig. 435) posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, basal sclerotized band straight on a small distance in middle; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males (Fig. 436) shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 443. Spermatheca as in Fig. 444, female ringstructures as in Figs 445-446.

ETYMOLOGY: The species is named after Dr. Manfred Uhlig (Berlin, Germany) who greatly encouraged my work in the first years with an inspiring knowledge of literature, and who later initiated the digitization of the bulk of articles on Staphylinidae taxonomy and made them available to many people.

COMPARATIVE NOTES: Details under *O. monticola*, with remarks on the complex.

DISTRIBUTION: Currently only known from China (western Hubei) and a doubtfully associated specimen from Nepal.

BIONOMICS: Specimens were collected by sifting moss on bank of a small forest stream.

***Ochtheophilus zerchei* sp. nov.**

Figs 498-500, 559, 565

TYPE MATERIAL: HOLOTYPE (♂): "NEPAL: [Western region, Gandaki,] Himalaya, Dhawalagiri, Region Parbat, Nange Thati, 2500m [28°23'05"N, 83°42'37"E], 28.V.2004, leg. A. Kleeberg [from moss on stones in small creek]" (ZMHB). – PARATYPES (66): same data as holotype (coll. Kleeberg, 2). – "Dhawalagiri, Region Parbat, Chitre, 2500m [28°25'01"N, 83°41'52"E, sifted wet mosses], 26.V.2004, leg. A. Kleeberg (coll. Kleeberg, 4, coll. Schülke, 1 ♀, HNHM, 1). – "Dhawalagiri, Region Parbat, near Chitre, Ghar Khola valley, ~2400m [28°27'36"N, 83°38'06"E], 24.V.2004, leg. A. Kleeberg [sifted organic material at bank of a tributary to Ghar Khola]" (coll. Kleeberg, 3, coll. Schülke, 1 ♂). – "CHINA: SICHUAN: Ya'an

Prefecture, Tianquan Co., E Erlang Shan pass, 29°52.36'N, 102°17.82'E, 2900m, 20.VI.1999, leg. A. Pütz" (SDEI, 1 ♂). – "HUBEI: Daba Shan, creek valley 8km NW Muyuping, 31°29'N, 110°22'E, 1550-1650m, 18.VII.2001, leg. M. Schülke (C01-16), creek valley, deciduous forest, moss; sifted" (coll. Schülke, 2 ♂, 1 ♀, 32, HNHN, 3 ♂, 2 ♀), same but 1540m, leg. D. Wrase (16), edge of small creek (USNM, 1, MNHP, 1, MHNG, 1, NKME, 1, NHMW, 1, FMNH 1, AMNH, 1). – "SHAANXI: Qinling Shan, river bank above Houzhenzi, 115km WSW Xi'an, 33°50'N, 107°47'E, 1450m, 5.VII.2001, leg. M. Schülke (C01-06), gravel bank; floating; mixed deciduous forest, moss, mushrooms; sifted" (coll. Schülke, 6).

DESCRIPTION: Forebody as in Fig. 559. Measurements (n=10): HW = 0.59 (0.52-0.63); TW = 0.53 (0.49-0.57); PW = 0.66 (0.58-0.70); SW = 0.87 (0.77-0.95); AW = 0.90 (0.75-1.01); HL = 0.47 (0.41-0.50); EL = 0.20 (0.18-0.21); TL = 0.10 (0.09-0.10); PL = 0.53 (0.48-0.56); SL = 1.00 (0.89-1.10); SC = 0.91 (0.81-1.00); FB = 2.07 (1.87-2.24); BL = 3.85 (3.47-4.15) mm. Whole body very dark brown, head darkest, almost black, elytra sometimes very slightly lighter but still dark brown, scutellar area to shoulders black. Antennae, mouthparts and legs dark brown, antenna blackish, tarsi and both ends of tibiae occasionally somewhat lighter. Body with somewhat greasy lustre due to rather fine and shallow punctation on head and pronotum, but less distinct coriaceous microsculpture on interspaces; elytral punctation fine, shallow but rather dense. Pubescence on elytra very dense, strong and very regularly spaced, in contrast with somewhat less conspicuous setation of head and pronotum: with rather fine and dense setae. Abdominal tergites with setae finer than elytral ones but much longer, especially at apices of tergites and adjacent to laterosternites. Head anterior eyes and near inner posterior margin of eye with stronger and much longer bristles, as well as pronotal margin; at middle of tibiae with darker bristles. Elytral apex not only with a few slightly longer setae near sutural corner but one strong seta close to outer corner also. Last tarsomere with a few setae only.

Forebody. Antenna as in Fig. 565. Clypeus almost impunctate (colliculate microsculptured), trapezoid, corners rounded, anterior edge gently arched; separated by impressed transversal line (frontoclypeal suture) across a shinier area. Supra-antennal prominences well developed, feebly separated from clypeus/vertex by impressions. Vertex with oblique impressions in middle almost joining in V-shape. Temples slightly bulging, evenly curved, about as long as half of eye length. Neck separated by an impressed transversal groove, microsculpture much stronger than on head, with transverse cells, no setation. Pronotum with a narrow marginal bead, getting inconspicuous anteriorly with pronotal corners strongly curved in ventral direction. Posterior pronotal angles well-formed, just slightly obtuse-angled, sides in posterior 1/3 very gently concave/bisinate. 'Anchor' fully formed, longitudinal midline as a slightly elevated, impunctate, weakly microsculptured line, parallel to this line two gentle, semi-longitudinal elongate elevations in anterior half of disc. In corners of anchor feeble, oblique impressions directed outwards, in middle at sides of midline two smaller impressions. Elytra slightly broadening posteriorly, sutural corners narrowly rounded; apical sides slightly oblique and in inner halves more or less straight. Elytral surface rather even with two shallow, very elongate impressions behind scutellum. Head with fine coriaceous/colliculate microsculpture, fading on elevated parts, stronger in impressions, on pronotum microsculpture slightly stronger and more even. Punctuation on head fine but dense, more so on posterior part and sides, on pronotum

more evenly spaced, average interspaces larger than puncture diameters; elytral punctation more even and regularly spaced, average interspaces (with indistinct coriaceous microsculpture) about as puncture diameters, punctures discrete.

Abdomen. Compared to forebody, abdomen with much more sparse, finer, less distinct punctation, microsculpture on tergal apices fine coriaceous with moderately transverse cells. Tergite VII posterior margin with palisade fringe broadened in middle with more coarse spiniform processes. Tergite VIII basal edge evenly arched, without concavity in middle of basal sclerotized band; apical edge with sinuate (protruding) corners, and broad, moderately deep emargination in between. Sternite VIII with rounded apical corners, apex in males shallowly concave laterally, gently sinuate in middle; in females slightly more sinuate (convex) in middle. Tergite X unmodified, apex very slightly wider in males than in females. Aedeagus as in Fig. 498. Female ringstructures as in Figs 499-500.

ETYMOLOGY: The species is named after Dr. Lothar Zerche, retired curator at the Deutsche Entomologische Institut, who hosted me on an extended visit to the old building (in Eberswalde) in the spring of 2002, thereby providing a chance to examine this vast collection.

COMPARATIVE NOTES: This is a very small species in the *O. monticola* group, can be easily distinguished by the parameral shape.

DISTRIBUTION: Currently known from Nepal and Chinese provinces of Sichuan, Hubei and Shaanxi.

BIONOMICS: Specimens were collected from moss on stones in a small stream and by sifting mosses and other organic debris at banks of mountain streams.

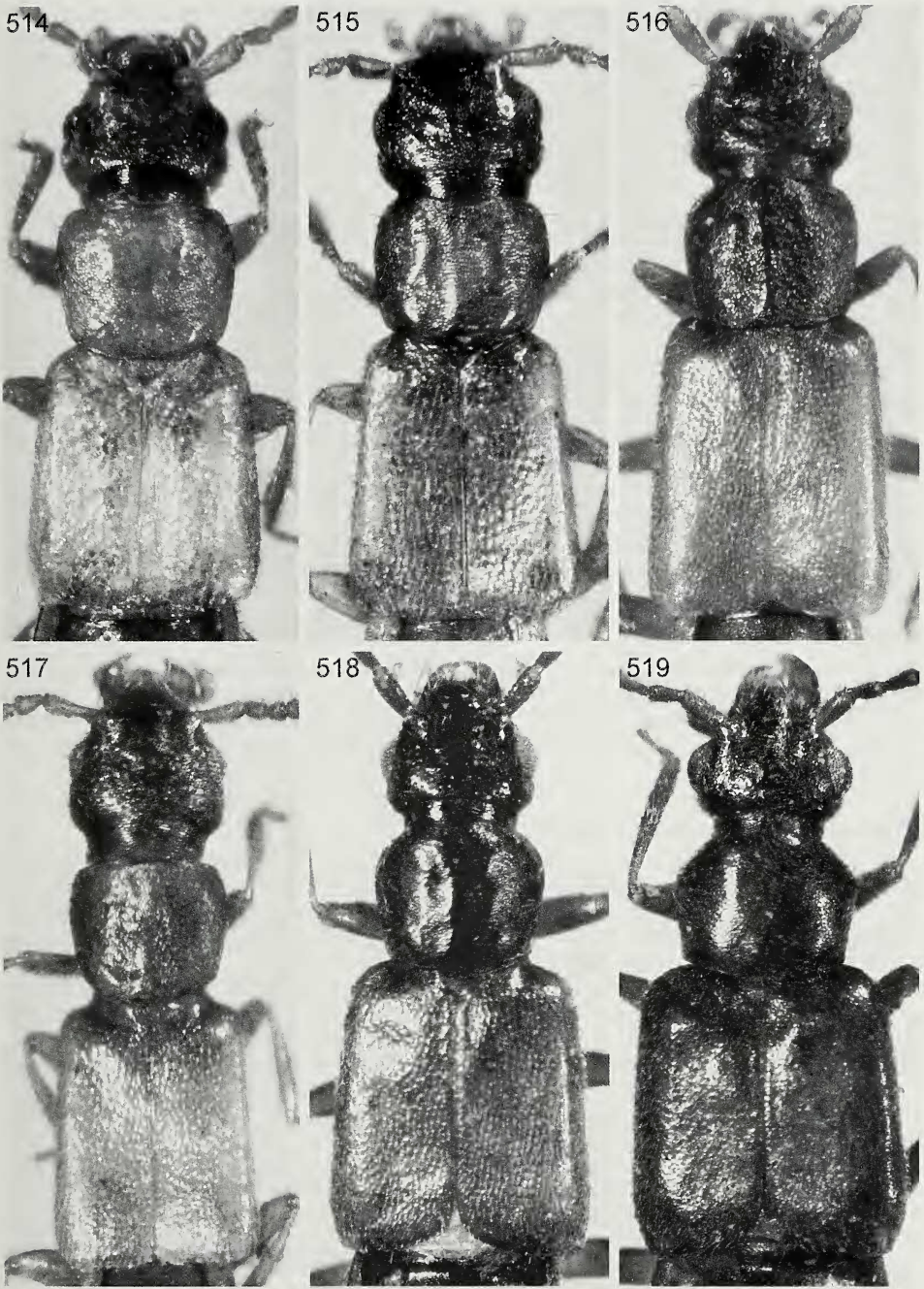
APPENDIX

This section contains the non-type label information of the more common species. In order to avoid making the data lists extremely long, collectors' names and exact collecting dates are omitted, of the latter only the month (in roman numerals) is given. Bionomical data found on these labels are summarized under the respective species treatments.

Ochtheophilus andalusiacus (Fagel, 1957)

NON-TYPE MATERIAL EXAMINED: **MOROCCO:** Haut Atlas, ca. 60km SW Asni, bank of O. Nfiss river (20), 30°57'20"N, 08°14'46"W, 1260m, coll. Assing (1). — [Marrakech,] Urika [Ourika] *+31.40/-07.78*, NHMW (1). — **ALGERIA:** Philippeville [Skikda] *+36.86/+06.90*, ISNB (1). — Bou Berak près Dellys *+36.88/+03.83*, coll. Fauvel, ISNB (1). — Tarfaïa *+31.78/+05.53*, ISNB (1). — Gorges de la Chiffa, ruisseau des Singes, 280-380m *+36.42/+02.76*, (V), MHNG (1). — **GREAT BRITAIN:** HF, Treago, St. Weonards (SO42) *+51.91/-02.74*, (I), coll. R.W. Lloyd, MMUE (1). — SD, Colyton (SY29) *+50.74/-03.07*, (III), coll. R.W. Lloyd, MMUE (1). — SD, Budleigh-Salterton (SY08) *+50.63/-03.33*, coll. G. C. Champion, BMNH (6). — NN, Wallington (NZ18) *+54.72/-01.70*, coll. Power, BMNH (1). — New Forest, Brinken Wood (Gb105), 50°50.75'N, 1°36.00'W, (IV), coll. Vorst (1). — **SPAIN:** Cataluna, Riells, Montseny *+41.78/+02.51*, (V), ISNB (2), BMNH (1). — Tarragona, Sta. Perpètua de Gaià, Rio Gaia *+41.46/+01.39*, (IV), coll. Lott, BMNH (1). — Alicante, Cocentaina, Rio Penaguila (30SYH2589), 410m *+38.73/-00.41*, (IV), coll. Lott, BMNH (2).

– Málaga, stream near Cómpea (30SVF1277), 400m *+36.84/-03.98*, (I), coll. Lott, BMNH (1). – Málaga, river Slam above Torrosc (30SVF1474) *+36.81/-03.96*, (I), coll. Lott, BMNH (2). – Málaga *+36.72/-04.42*, coll. G. C. Champion, BMNH (6). – Hispania bor., Olot / Pyénées *+42.18/+02.48*, (VII), coll. Renner (1). – Andalusia, right bank of Guadalfeo river, near Orgiva *+36.88/-03.43*, (IV), HNHM (3), coll. Clayhills (1). – Andalusia, left bank of Guadalfeo river, near Orgiva *+36.88/-03.41*, (IV), HNHM (2), coll. Clayhills (1). – Andalusia (MA), Jubrique, 500m *+36.57/-05.22*, (III), coll. Wunderle (4). – Andalusia, umg. Tarifa *+36.03/-05.61*, (III), coll. Wunderle (1). – Andalousie, prov. Granada, Lanjaron (183) *+36.91/-03.48*, (IV-V), ISNB (1). – Estremadura, Guadalupe, arroyo del Águila *+39.45/-05.34*, (V), ISNB (1). – Jaén, Valdepeñas de Jaén, Trib. of R. Guadajoz, 900-1000m *+37.58/-03.82*, (V), BMNH (1). – Ronda *+36.73/-05.17*, coll. Cameron, BMNH (1). – Alsasua *+42.90/-02.17*, (VI), NMPC (1), Pais Vasco, Hernani, Rio Urumea (Es501c-d), 43°15.90'N, 1°58.15'W, (VI), coll. Vorst (7). – Pais Vasco, Hernani, Pergoaga, Rio Urumea (Es502c, Es502e) 43°13.43'N, 1°55.53'W, 35m, (VI), coll. Vorst (3). – Pais Vasco, Elizalde, Ergoien, Rio Oiartzun (Es503p), 43°16.90'N, 1°49.19'W, 85m, (VI), coll. Vorst (1). — **FRANCE:** Haute-Savoie, Malpas *+46.02/+05.97*, (V), in part coll. Toumayeff, MHNG (1). – Hyères *+43.12/+06.12*, (IV), coll. Last, MMUE (1). – Avignon, Rhône (détritus de inond-ns) *+43.95/+04.81*, (III), к. А. Яковлева, ZISP (1). – Gallia mer., Montpellier *+43.61/+03.88*, (IV), coll. Renner (1). – Gallia mer., Cannes, Tanneron, 250m (and 300-400m) *+43.59/+06.88*, (VI), coll. Wunderle (16), coll. Renner (3). – Gallia mer., Tanneron, Auribeaux - Lac de S. Cassien *+43.59/+06.82*, (V), coll. Wunderle (1). – Sorèze (Tarn) *+43.48/+02.06*, coll. Rey, MHNL (1). – Lozère *+44.42/+03.76*, coll. Fauvel, ISNB (1). – dept. Pyr.-Or., Forêt de la Massane *+42.483/+03.02*, (VII), coll. Lohse, MHNG (1). – Gavarnie, Pyrénées *+42.73/+00.02*, ISNB (1). – Korsika, Cursagliente / Pietraserana / Corte *+42.24/+09.35*, (IV), coll. Wunderle (1). – Corsica, Castagnica, Erabajolo *+42.27/+09.28*, (IV), coll. Wunderle (3). — **GERMANY:** Reinfeld, i. Holstein *+53.84/+10.49*, (IV), coll. G. Benick, MHNG (2), HNHM (1). – Schleswig-Holstein, Kreis Stormarn, Barnitz / Treuholz *+53.82/+10.48*, (X), coll. Renner (1). – [Bad] Oldesloe, Barnitzufer *+53.82/+10.48*, (IV), coll. Ullrich, MHNG (1). – Schleswig-Holstein, Barnitz b. Treuholz *+53.81/+10.48*, (VIII), coll. Assing (2). – Bavaria, Mittenwald *+47.42/+11.25*, NHMW (1). – N Baden-Württemberg, Geddelsbach, S Öhringen *+49.15/+09.50*, (IX), SMNS (2). – Oberbayern, Oberau *+47.55/+11.15*, (VI), coll. Lohse, MHNG (1). — **SWITZERLAND:** Kt. Vaud, Saint-Sulpice *+46.51/+06.54*, (XII), coll. Toumayeff, MHNG (1). – Kt. Genève, Chancy, La Laire Rau, 350m, 46°08'30"N, 5°58'38"E, (V), (HNHM (3). – Kt. Genève, Chancy, La Laire Rau, 350m, 46°08'32"N, 5°58'53"E, (V), (HNHM (1). – Kt. Genève, la Laire (river) *+46.15/+05.97*, (II), MHNG (3). — **AUSTRIA:** Steiermark, Seebach Gem. Afenzl-Land, Stübmingbach, 700m *+47.55/+15.32*, (VII), coll. Kapp (1). – Gastein *+47.18/+13.10*, (VI), NHMW (1). – Grünburg (O. Oe.) *+46.78/+14.38*, NHMW (1). – umg. Wien *+48.23/+16.15*, coll. Klima, NHMW (1). — **ITALY:** Liguria, Altare *+44.34/+08.34*, (VII), coll. Scheerpeltz, NHMW (1). – Emilia-Romagna: Parma Corniglio, T. Bratica (It603p), 44°28.09'N, 10°05.88'E, (V), coll. Vorst (1). – Monti dell'Uccellina (GR) seashore, 3km SE T. Collelungo *+42.64/+11.07*, (V), coll. Zanetti (1). – Sardinia, Villanova Strisaili, spring S. Barbara *+39.95/+09.48*, (X), coll. Wunderle (1). – Poggio Cavallo, Grosseto *+42.77/+11.17*, (IV), coll. Binaghi, MCSN (8). – Abruzzo, Fara Filiorum Petri, Fiume 225m fluss *+42.24/+14.19*, (V), coll. Kapp (8), HNHM (2\$). – Abruzzo, Maiella, Val Foro, 650m *+42.21/+14.14*, (V), coll. Kapp (2), HNHM (2♀), coll. Clayhills (1). — **CZECH REPUBLIC:** Altvater [Praděd or Klauický Snežník] *+50.08/+17.24*, coll. Kolbe, UWCP (1). — **POLAND:** Silesia, Teschen [Cieszyn] *+49.77/+18.60*, FMNH (2), MSNV (3), NMPC (2). — **SLOVAKIA:** Pieniny, Dunajec river *+49.39/+20.41*, coll. Roubal, SNMC (1). – Liptóújár [Liptovský Hrádok] *+49.05/+19.65*, (VII), HNHM (3). – Bukovské vrchy, bank of Zbojský stream, 450m *+49.04/+22.47*, (VI), SMBC (1). – Nová Sedlica, bank of Zbojský stream, štrk, 370m *+49.04/+22.50*, (VI), SMBC (1), HNHM (1). – Belianské Tatry, Ždiar, stream Biela DFS *+49.28/+20.36*, (VII), SMBC (1♀). — **GREECE:** Corfu, Potamos *+39.63/+19.88*, coll. Bernhauer, FMNH (1). – Samothraki bei Kirche Kremniotiassa, 40°25'N, 25°34'E, 400m, (V), MHNG (1). – Morea, Krestena S. E. *+37.61/+21.63*, (V), ISNB (2). – Morea, Greka *+37.56/+21.70*, (V), ISNB (1). – Kreta (South), Agios Galini *+35.11/+24.70*, (IV), coll. Kleeberg (8). – Kreta occ., Vallée Keramaris [Kerames?], 300m *+35.17/+24.52*, (IV), ISNB



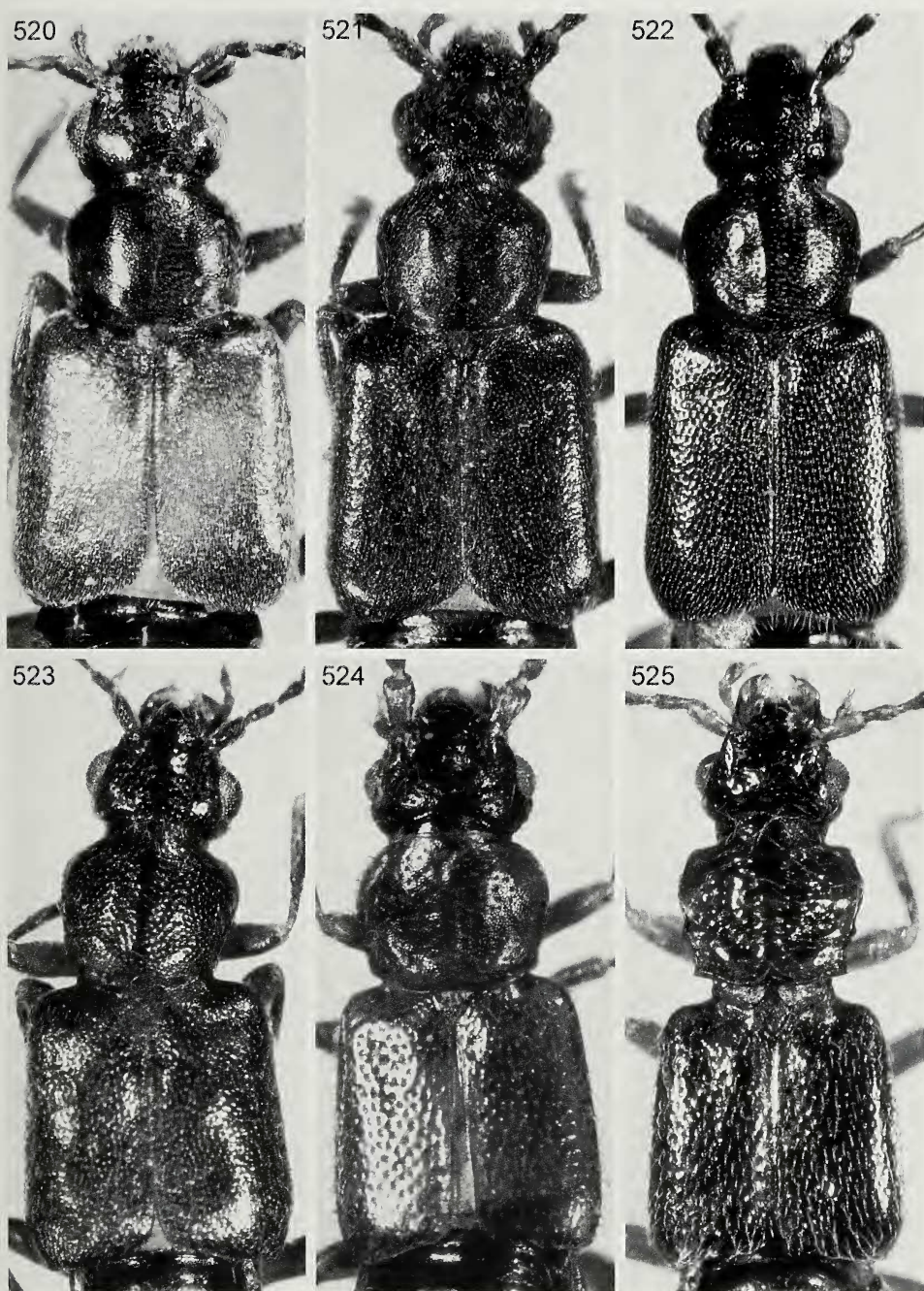
FIGS 514-519

Forebodies of *Ochtheophilus* species. *O. aurorans* (Peyerimhoff) (514), *O. scheerpeltzi* (Fagel) (515), *O. angustatus* (Erichson) (516), *O. filum* (Fauvel) (517), *O. carnicus* (Scheerpeltz) (518), *O. emarginatus* (Fauvel) (519).

(2). – Creta occ., Perivolia, 30m $+35.37/+24.50^*$, (IV), ISNB (1). – Creta or., Vrakhas - H. Georgios, 250m $+35.27/+25.57^*$, (IV), ISNB (3). – Evvia, Gides, $+38.50/+24.00^*$, (V), ISNB (1). – Rhodos, Kalte, quellbach b. Apollona, südhang Profitis Ilias $+36.27/+27.95^*$, (IV), coll. Puthz, MHNG (1). – Rhodos, Zufl. Gaidouras R. an strasse Apollona/Laerma $+36.22/+27.96^*$, (IV), coll. Puthz, MHNG (7), HNHM (3). – Rhodos, Loutani K. obh. Epta Piges $+36.25/+28.12^*$, (IV), coll. Assing (1). – Samos, Campos $+37.71/+26.67^*$, (IV), coll. Zanetti (1). — **TURKEY**: Izmir [Ilidja], 60m $+38.42/+27.15^*$, (V), ISNB (3). – Antalya, 5km NW Kemer, felsiges Flussufer in Schluchttal (030a), $36^{\circ}36'03.0''\text{N}$, $30^{\circ}29'03.6''\text{E}$, 197m, (III), coll. Rose (3). – SSW Antalya, Ciralı, streambank $+36.42/+30.47^*$, (IV), coll. Wunderle (25). — **UKRAINE**: Carpath. or., Worochta [Vorokhta], Prut [river] $+48.29/+24.57^*$, (VI), in part coll. Lokay, NMPC (3). — **RUSSIA**: [Karelia,] Salmi $+61.37/+31.85^*$, MZHF (1). – Crimea, Crimean Game Preserve (Krymske zapovidno-myslyvske hospodarstvo), upper part of Katcha river, bank, 800m $[44^{\circ}43'31''\text{N}$, $33^{\circ}32'55''\text{E}]$, coll. Schülke (1). — **ROMANIA**: jud. Suceava, Munții Căliman, stream Dorna, 3km SW Bâta Poieni 7km S Dornișoara (52) $47^{\circ}10'38''\text{N}$, $25^{\circ}05'20''\text{E}$, 1180m, (VI), HNHM (1). – jud. Brașov, 2.5km SE Brădet, stream Tărlung, gravel-bank under and near bridge (104) $45^{\circ}33'11''\text{N}$, $25^{\circ}47'00''\text{E}$, 760m, (V), HNHM (5), MGAB (1). – jud. Alba, Munții Trascău, Cheile Vălișoarei, 2km SE Vălișoara, deep gorge (112), $46^{\circ}22'49''\text{N}$, $23^{\circ}34'52''\text{E}$, 410m, (VI), HNHM (2). – jud. Maramureș, Munții Maramureș, Poienile de sub Munte, confluence of Roșușu (Сокотай) and Rica (132), $47^{\circ}51'23''\text{N}$, $24^{\circ}30'52''\text{E}$, 590m, (VII), HNHM (1). – jud. Harghita, 6km W Remetea, Poiana Cătălin, stream Eseniu, bank at clearing (188), $46^{\circ}47'24''\text{N}$, $25^{\circ}19'23''\text{E}$, 1000m, (V), HNHM (1). – jud. Harghita, 4km SW Toplița, stream Alunișul, wide, stony bank (190), $46^{\circ}54'06''\text{N}$, $25^{\circ}18'26''\text{E}$, 750m, (V), HNHM (4). – jud. Bacău, Munții Ciucului, 3km E Valea Uzului, bank of r. Uz, Kőközi-szoros (261), $46^{\circ}20'13''\text{N}$, $26^{\circ}17'22''\text{E}$, 580m, (X), HNHM (1). – jud. Sibiu, Munții Făgăraș, pâraul Șerbota, 5km SSE Porumbacu de Sus, gravel island in stream (538), $45^{\circ}40'38''\text{N}$, $24^{\circ}30'41''\text{E}$, 570m, (V), HNHM (1). — **SWEDEN**: Lycksele lappmark, Tärna, Biessegielas (4224a) along lake Stor-Björkvattnet $+65.48/+15.43^*$, (VI), HNHM (1\$). – Lycksele lappmark, Tärna, Rönnebäcken, (4223a), along lake Lill-Björkvattnet $+65.49/+15.36^*$, (VI), HNHM (1\$), (1). – Dalarna, Transtrand, Hälla (928a), along the river Dalälven $+61.28/+13.16^*$, (VI), HNHM (1\$). — **CANADA**: NEWFOUNDLAND: Highlands Waters $+48.16/-58.94^*$, (V), BMNH (1).

Ochtheophilus angustatus (Erichson, 1840)

NON-TYPE MATERIAL EXAMINED: **ALGERIA**: Biskra $+34.85/+05.73^*$, coll. Fauvel, ISNB (2). – Souk el Arba $+35.55/+02.37^*$, coll. Fauvel, ISNB (1). – Bou Berak près Dellys $+36.88/+03.83^*$, coll. Meyer, SDEI (3), in part coll. Fauvel, ISNB (6). – Kerrata $+36.48/+05.28^*$, coll. Fauvel, ISNB (1). – Philippeville [Skikda] $+36.86/+06.90^*$, ISNB (1). — **EGYPT**: “Aegypten, Forgart 1926”, NHMB (1\$). — **SPAIN**: Algeciras $+36.13/-05.50^*$, coll. Reitter, HNHM (1). – Prov. Girona, Platja d'Aro $+41.82/-03.07^*$, (V), coll. Ulbrich, SMNS (2). – Tarragona, Sta. Perpètua de Gaià, torrent dal Voltor $+41.45/+01.42^*$, (IV), coll. Lott, BMNH (1). — **FRANCE**: Elne (Pyren.-Or.) $+42.60/+02.96^*$, NHMW (2), coll. Mequignon, MHNG (1). – Sorèze $+43.48/+02.06^*$, NHMW (2). – Alpes-Maritimes, Inond. Siagne $+43.72/+06.81^*$, (XII), coll. Ochs, MHNG (1). – Alpes-Maritimes, Inond. Vesubie $+44.07/+07.25^*$, (IV), coll. Ochs, MHNG (1). – Alpes-Maritimes, Inond. Var $+43.43/+06.73^*$, (V and VIII), coll. Ochs, MHNG (2). – Bord de Mer, Nice $+43.69/+07.26^*$, (VI), coll. Ochs, MHNG (1). — **GERMANY**: Wolfratshausen (Oberbayern), Pupplinger Au, Hüdopohl, Isar $+47.92/+11.42^*$, (V-VII), ZSMC (8), coll. Lohse, MHNG (1). – München, Isartal $+48.15/+11.58^*$, (V-VI), ZSMC (1), coll. Benick, MHNG (1). – Garching bei München, Isar $+48.25/+11.65^*$, (VII), ZSMC (1), coll. Heyden, SDEI (1). – München, Grünwald, Isar $+48.06/+11.52^*$, (VI and VIII), coll. Ihssen, ZMHB (1), coll. Lindberg, MZHF (1). – Garmisch $+47.50/+11.10^*$, (VI), coll. Ihssen, ZMHB (1). – Ndb., Landshut, Isar $+48.54/+12.15^*$, (VII), coll. Lohse, MHNG (1). – Eschenlohe, Murnau O. B. $+47.83/+11.20^*$, (VIII), coll. Ihssen, ZMHB (1). – Gr. Hesselöhe (München), Isar $+48.09/+11.53^*$, (V-VI and IX), coll. Ihssen, ZMHB (3), coll. Bosch, SMFD (1), ZSMC (1). — **SWITZERLAND**: Kt. Genève, les Baillelets crue la London [left side] $+46.20/+06.00^*$, (II), MHNG (1). — **AUSTRIA**: Donau-Auen $+48.13/+16.92^*$, coll. Ulbrich, SMNS (1). – umg. Graz (Steiermark) $+47.07/+15.45^*$,



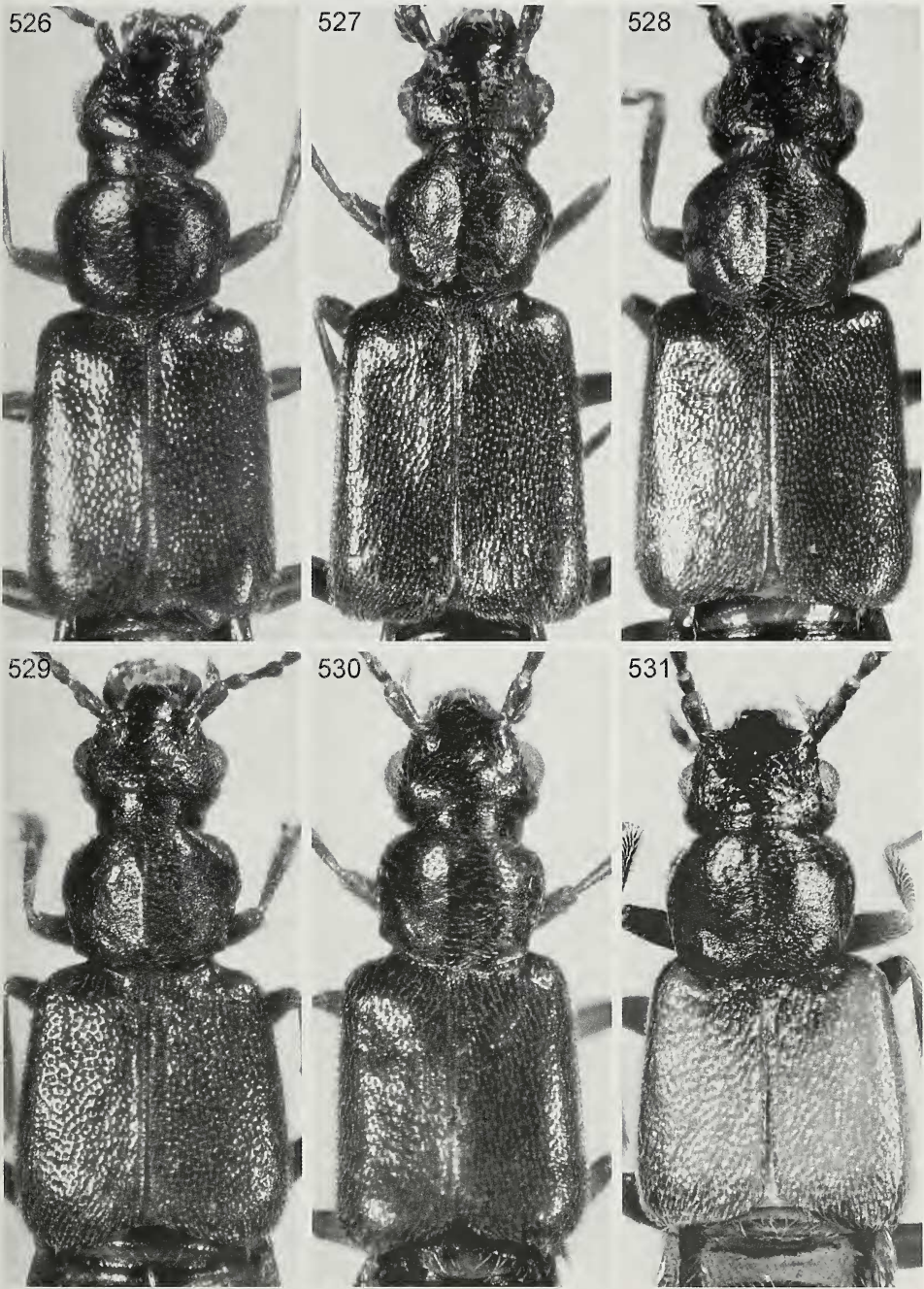
FIGS 520-525

Forebodies of *Ochtheophilus* species. *O. sericinus* (Solsky) (520), *O. japonicus* (Watanabe & Shibata) (521), *O. aureus* (Fauvel) (522), *O. laevis* (Watanabe & Shibata) (523), *O. biimpressus* (Mäklin) (524), *O. flexuosus* Mulsant & Rey (525).

NHWM (1), coll. Lindberg, MZHF (1). – Bad Fusch (Nord-Tauern) *+47.20/+12.85*, coll. Luze, NHMW (1). – Reisach (Kärnten) *+46.65/+13.15*, coll. Scheerpeltz, NHMW (3). – S-Kärnten, Karawanken, Zell-Freibach *+46.47/+14.43*, (VI), coll. Papperitz, SMNS (1). – umg. Wien *+48.23/+16.15*, coll. Skalitzky and coll. Luze, NHMW (3), coll. Paganetti, HNHM (1). – Linz, Katzenau *+48.30/+14.30*, (VI), NHMW (1). – Seitztal (Styria) *+47.38/+14.91*, coll. Moosbrugger, NHMW (1). – umg. Villach, Kilgendorf Gail *+46.60/+13.83*, (IV), coll. Strupi, NHMW (1). – Moosburg v. Sonnenburg *+46.66/+14.16*, coll. Eppelsheim, NHMW (4). – Leithaufer *+47.86/+17.30*, HNHM (1). – Lang-Enzersdorf (b. Donau) *+48.30/+16.35*, (VI), coll. Bernhauer, FMNH (3), coll. Skalitzky, coll. Klima and coll. Luze, NHMW (5), Bisamberg *+48.33/+16.35*, coll. Knirsch, FMNH (1). – Wiener Neustadt *+47.80/+16.25*, coll. Knirsch, FMNH (1). – Reisach, Gailt. (Kärnten) *+46.65/+13.15*, coll. Krogh, SMFD (4), coll. Bernhauer, FMNH (1). — **ITALY**: Emilia-Romagna: Parma, Vigoleno, Stirone (It610ax), 44.811°N, 9.906°E, 189m, (V), coll. Vorst (1). – Spilamberto, Emilia *+44.53/+11.02*, (XI), coll. Binaghi and coll. Mancini, MCSN (12), HNHM (1). – Dint. Firenze, alluv. Arno *+43.68/+10.28*, (I), coll. Bernhauer, FMNH (1). – Friuli - Ven. Giul., Fella-mündung in den Tagliamento (6), 46°22'17"N, 13°07'01"E, 250m, (IX), coll. Schülke (12). – Friuli - Ven. Giul., Tagliamento-ufer, S bridge near Codroipo (3), 45°56'50"N, 12°54'49"E, (IX), coll. Schülke (5). – Friuli - Ven. Giul., Fella-Ufer W Carnia, Eisenbahnbrücke (5), 46°23'N, 13°07'E, 250m *+46.38/+13.12*, (IX), coll. Schülke (4), HNHM (2). – Firenze *+43.77/+11.25*, (XII), MSNV (1). – Emilia, Reno [Rocno] *+44.53/+11.31*, (XI), coll. Lokay, NMPC (1), coll. Jörger, NHMB (1). – Emilia, Secchia *+44.62/+10.78*, (VIII), MHNG (1). – Poggio Cavallo, Grosseto *+42.77/+11.17*, (IV), coll. Binaghi, MCSN (8). – Arquata-Scivia, Piemonte *+44.68/+08.88*, (VII-IX), coll. Mancini, MCSN (1). – Serravalle Scrivia *+44.72/+08.85*, (IX-XI), MCSN (3). – Bazzano *+44.50/+11.08*, (IV and X), HNHM (4), coll. Rambousek, NMPC (1). – Imola *+44.35/+11.70*, coll. Stierlin, SDEI (1). – Basilicata, Potenza, E Latrónico, Fiume Sinni Ufer (5), 40°04'05"N, 16°02'26"E, 520m, (V), coll. Assing (1). – Bologna, Torfa *+44.48/+11.33*, (X), in part coll. Schuster, NHMW (1). — **SLOVENIA**: Carniolia, Kranj *+46.23/+14.37*, coll. v. Gspan, PMSL (2). — **BOSNIA-HERZEGOVINA**: Ilidže (Bosnien) *+43.83/+18.31*, coll. Bernhauer, FMNH (3), coll. Lindberg, MZHF (1). – Željeznica *+44.12/+18.11*, coll. Fodor, HNHM (1). — **GREECE**: Hypáti *+38.87/+22.24*, (IV), coll. Roubal, SNMC (1).

Ochtheophilus angustior (Bernhauer, 1943)

NON-TYPE MATERIAL EXAMINED: **GREAT BRITAIN**: MM, Skenfrith (SO42) *+51.88/-02.79*, (XI), coll. R.W. Lloyd, MMUE (1). – HF, Treago, St. Weonards (SO42) *+51.91/-02.74*, (XII), coll. R.W. Lloyd, MMUE (1). – MY, Queen Mary's Dub (SE37) *+54.12/-01.49*, (IX), MMUE (1). – DY, Snelston (SK14) *+52.99/-01.79*, (VII), MMUE (5). – ML, Melling *+53.49/-02.93*, (IV), MMUE (1). – NN, Wallington (NZ18) *+54.72/-01.70*, coll. Power, BMNH (1). – EY, Yorkshire, Scarborough (TA08) *+54.28/-00.43*, coll. G. C. Champion, BMNH (11). – East Keswick, River Wharfe *+53.91/-01.46*, (VII), coll. Steel, BMNH (1). – Worcestershire, River Teme *+52.31/-02.56*, (VII), BMNH (1). — **SPAIN**: Andalusia (CA), umg. Algeciras, Sierra de Luna, 350m *+36.09/-05.51*, (III), coll. Wunderle (1), coll. Assing (2). — **FRANCE**: Var, St. Aygulf, in. Argens *+43.42/+06.71*, (XI), MHNG (1). – Savoie, Pont du Fier *+45.93/+05.89*, (X), MHNG (1). – Haute-Savoie, Vongy *+46.39/+06.51*, (IV and VI), MHNG (6). – Lozère, Sainte-Enimie *+44.37/+03.41*, (VII), coll. Odier, BMNH (1). – Hautes prov., Annot, Vaire, 900m *+43.95/+06.68*, (VI), coll. Wunderle (2). – Rhone-Alpes, dept. Isore, Boule-Tal, SE Die, 800m *+44.74/+05.37*, (VII), SMNS (2), к. А. Яковлева, ZISP (1). — **LUXEMBOURG**: Luxembourg, Septfontaines, Eisch (Lx9f), 49°41.64'N, 6°00.06'E, (VI), coll. Vorst (3). — **GERMANY**: N Baden-Württemberg, umg. Neuenstein, Bernhardsmühle *+49.20/+09.57*, (IV and VIII), SMNS (4). – N Baden-Württemberg, umg. Öhringen, Klärarl./Unterohr *+49.20/+09.50*, (IV), SMNS (1). – N Baden-Württemberg, Geddelsbach, S Öhringen, *+49.15/+09.50*, (IV), SMNS (1). – Baden-Württemberg, Ochsenbach *+49.02/+08.98*, (III), coll. Hahn, SMNS (1). – Baden-Württemberg, Neuhausen *+49.10/+09.48*, (V), coll. Ulbrich, SMNS (1). — **SWITZERLAND**: Kt. Valais, Barges près Vouvry *+46.33/+06.88*, (IX), MHNG (6). – Kt. Valais, Leukerbad *+46.38/+07.63*, (VII-VIII), coll. Rätzer, NMBS (2). – Kt. Valais, Simplon [Simplonpass] *+46.25/+08.17*, (VII),



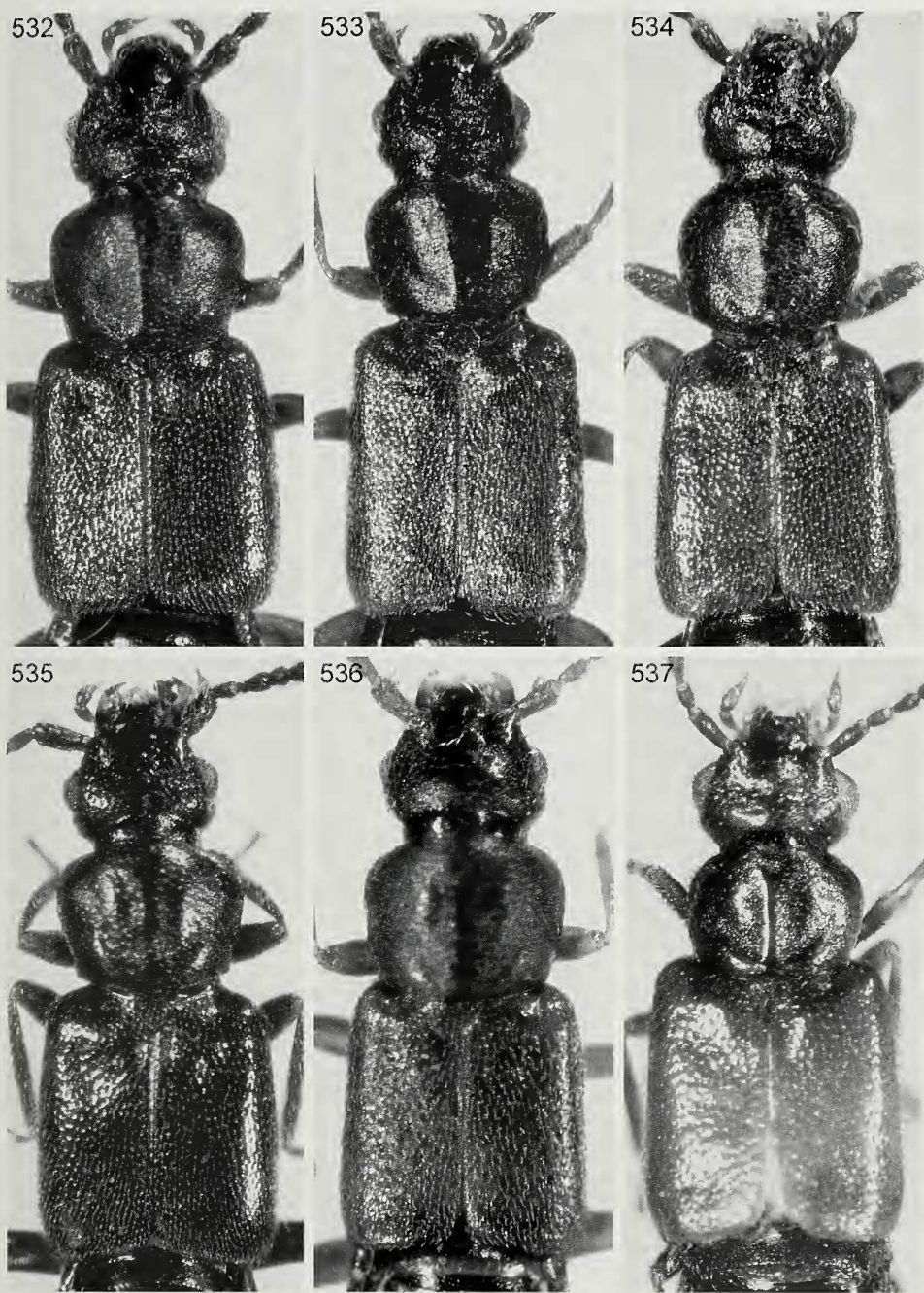
FIGS 526-531

Forebodies of *Ochtheophilus* species. *O. lenkoranus* (Scheerpeltz) (526), *O. rosenhaueri* (Kiesenwetter) (527), *O. praepositus* Mulsant & Rey (528), *O. planus* (LeConte) (529), *O. wunderlei* sp. n. (530), *O. columbiensis* (Hatch) (531).

coll. Rätzer, NMBS (1). – Kt. Valais, Berisal *+46.28/+08.05*, (VII), coll. Rätzer, NMBS (1). – Kt. Valais, Vétroz *+46.22/+07.29*, (VI), MHNG (1). – Kt. Vaud, Vufflens-la-Ville *+46.60/+06.55*, (IV), coll. Toumayeff, MHNG (1). – Kt. Vaud, Gland *+46.43/+06.27*, (VII), coll. Toumayeff, MHNG (9). – Kt. Vaud, Denges, La Venoge *+46.55/+06.57*, (IV), coll. Toumayeff, MHNG (1). – Kt. Vaud, Echandens, La Venoge, 390m *+46.57/+06.57*, (IV), coll. Toumayeff, MHNG (8). – Kt. Genève, Lully *+46.85/+06.83*, (III), coll. Toumayeff, MHNG (1). – Kt. Genève, la Laire (river) *+46.15/+05.97*, (II, VI and X), MHNG (9). – Kt. Genève, Dardagny, la London *+46.20/+06.00*, (IV), coll. Rehous, MHNG (1). – Kt. Genève, Chancy, La Laire Rau, 350m, 46°08'30"N, 5°58'38"E, (V), (HNHM (12). – Kt. Genève, Chancy, La Laire Rau, 350m, 46°08'32"N, 5°58'53"E, (V), (HNHM (2). – Kt. Genève, Chancy (15km SW Genf), la Laire, 350m *+46.15/+05.97*, (IV, V, VI and VIII), coll. Gollkowski (1), in part coll. Rehous and coll. Toumayeff, MHNG (23). – Kt. Genève, Malval, la London *+46.21/+05.99*, (VI and X), in part coll. Rehous, MHNG (3). – Kt. Genève, Russin, la London *+46.18/+06.02*, (V-VI), coll. Rehous, MHNG (3). – Kt. Genève, La Versoix (river) *+46.27/+06.17*, (VII), MHNG (1). – Kt. Genève, la London (river, left side), 385m *+46.17/+06.02*, (III-IV and VI and IX-X), in part coll. Toumayeff, MHNG (91). – Kt. Bern, Aarberg *+47.05/+07.28*, (IV), MHNG (1). – Kt. Bern, Gadmen *+46.73/+08.35*, (VII), coll. Rätzer, NMBS (1). — **AUSTRIA**: Grünburg (O. Oe.), Sand *+46.78/+14.38*, coll. Bernhauer, FMNH (1). – Kärnten, Karawanken, Waidisch b. Ferlach *+46.50/+14.35*, (VII), coll. Lohse, MHNG (2). – Kärnten, Karawanken, Eisenk., Ebriachbach *+46.49/+14.59*, (VII), coll. Wunderle (3). – Vorarlberg, Bregenz, Hohenweiler, Bach Rohrach, 500m *+47.58/+09.78*, (V), coll. Gollkowski (1). – Vorarlberg, Hohenweiler, Rickenbach, schotterbank, 480m *+47.56/+09.76*, (V), coll. Kapp (1). — **ITALY**: Emilia-Romagna: Parma, Agna, T. Parma (It623p), 44°29.30'N, 10°06.09'E, 514m, (V), coll. Vorst (2). – Emilia-Romagna: Parma, Vigoleno, Stirone (It610aw), 44°48.69'N, 9°54.37'E, 189m, (V), coll. Vorst (3). – Toscana: Massa-Carrara, Pontremoli, Magra (It621z), 44°23.15'N, 9°53.21'E, 254m, (V), coll. Vorst (1). – Umbrien, Perugia, Orvieto nach [Colonnaletta di] Prodo, (car-net), 350-500m *+42.75/+12.19*, (IV), coll. Assing (1). – Goriziano, Isola Morosini *+45.77/+13.43*, (V), coll. Rambousek, NMPC (1). – Friuli - Ven. Giul., Isonzo-ufer, SE Villesse (7), 45°51'11"N, 13°27'04"E, 10m, (IX), coll. Schülke (34), HNHM (1). – Friuli - Ven. Giul., Fella-mündung in den Tagliamento, 250m *+46.37/+13.12*, (IX), coll. Schülke (1). – Friuli - Ven. Giul., Tagliamento-ufer, S bridge near Codroipo (3), 45°56'50"N, 12°54'49"E, (IX), coll. Schülke (1). – Friuli - Ven. Giul., Fella-Ufer W Carnia, 46°23'N, 13°07'E, 250m, (IX), coll. Schülke (2). – 30km W Florenz, Figline, 200m (51) *+43.62/+11.47*, (VI), coll. Assing (6). – Perugia, Umbria *+43.13/+12.37*, (V), coll. Mancini, MCSN (1). – Prov. Udine, NW Pontebba, 800m *+46.51/+13.29*, (VIII), SMNS (1). — **SLOVENIA**: Sajeveč, Ponikve pri Sajevečah 903 *+45.74/+14.11*, (IX), coll. Assing (1). – Ljubljana (Tomačevo) *+46.03/+14.50*, (XI), PMSL (2). – Carniola, Kranj *+46.23/+14.37*, (X), coll. v. Gspan, PMSL (3). – Carnia, Wochein [Bohinj] *+46.30/+13.94*, (VII), MHNG (8). – Krain, Wochein, Savitza *+46.29/+13.80*, (VII), coll. Bernhauer, FMNH (4). — **SLOVAKIA**: Humenné *+48.93/+21.91*, (II), coll. Smetana, CNCI (3). – Nová Sedlica *+49.05/+22.53*, (VIII), coll. Smetana, CNCI (1). – Nová Sedlica, Zbojský stream 450m *+49.18/+22.42*, (VI), SMBC (2£), HNHM (1♂). – Bukovské vrchy, bank of Zbojský stream, 450m *+49.04/+22.47*, (VI), SMBC (1, 1♂), HNHM (1). – Bukovské vrchy, Ruské, bank of stream, 500m *+49.04/+22.41*, (VII), HNHM (1). — **GREECE**: Fthiotis, 40km W Lamía, bank of Sperchios river (14), 38°55'46"N, 21°59'19"E, 700m, *+38.93/+21.99*, (IV), coll. Assing (2).

Ochtheophilus aureus (Fauvel, 1871)

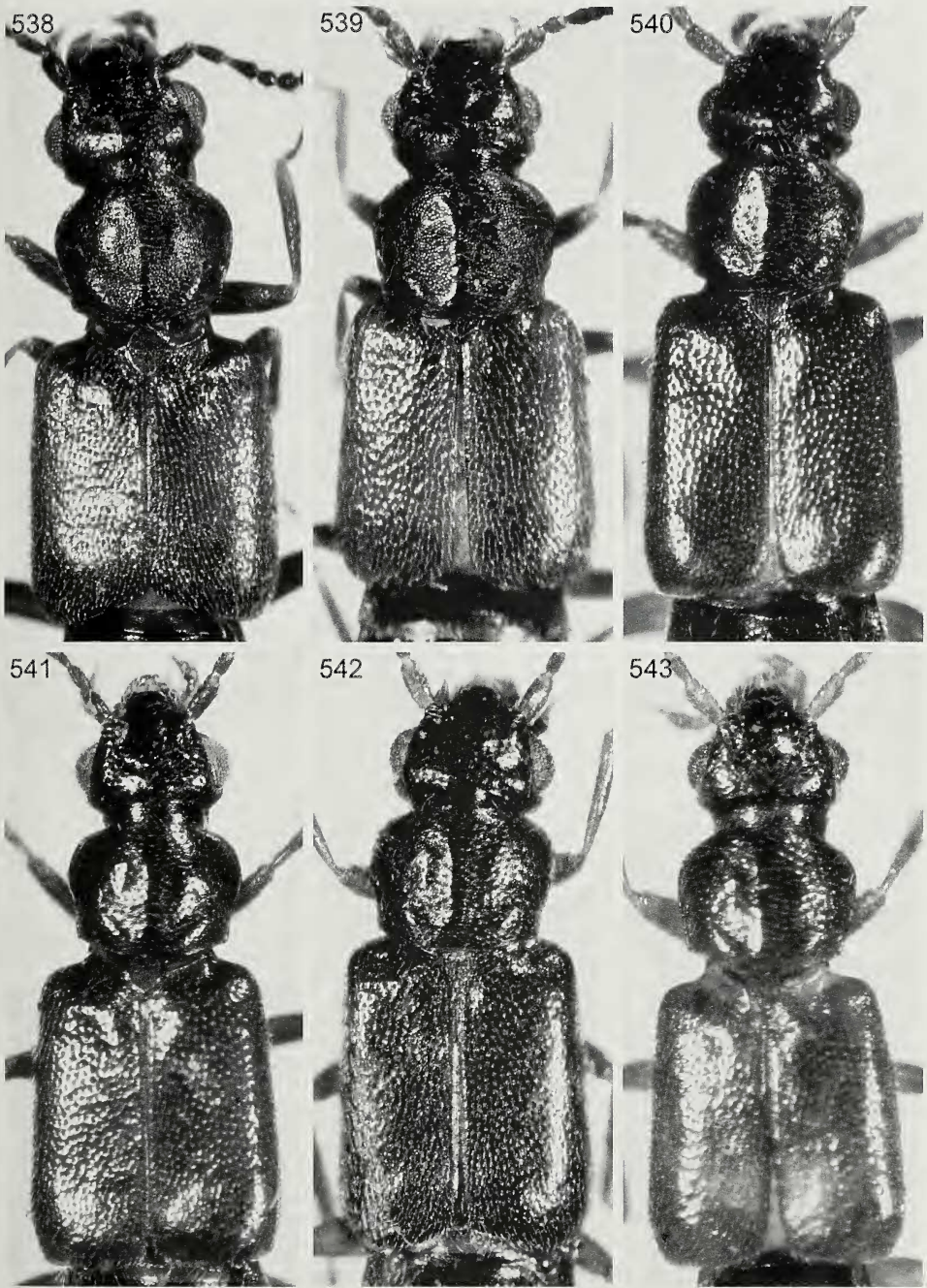
NON-TYPE MATERIAL EXAMINED: **ALGERIA**: Kabylia *+36.61/+04.73*, coll. Bernhauer, FMNH (1), coll. L. v. Heyden, SDEI (2). — **MOROCCO**: Er Rif, Dardara près de Xauen *+35.38/-04.30*, (III), MHNG (1). – High Atlas, Tizi-n-test (pass), 1600m *+30.83/-08.33*, (XII), coll. Wunderle (1). – Chiker region, Taza, (aven) Kef Frionato *+34.20/-04.05*, (V), MHNG (1). — **GREAT BRITAIN**: Scotland, Ae, Water of Ae (Gb21), 55°10.5'N, 3°34.5'W, (VI), coll. Vorst (2). – New Forest, Brinken Wood (Gb105), 50°50.75'N, 1°36.00'W, (IV), coll. Vorst (1). – Tonbridge *+51.20/+00.28*, coll. W.G. Blatch, MMUE (1). – Porlock *+51.21/-03.59*, (VI), coll. W.G. Blatch, MMUE (10). – Yorks, Mulgrave Woods, Whilby *+54.48/-00.70*, (III), coll. H. Britten, MMUE (1). – Chiddingfold *+51.11/-00.63*, (X), coll. B.M.



FIGS 532-537

Forebodies of *Ochtheophilus* species. *O. brachypterus* (Jeannel & Jarrige) (532), *O. tatricus* (Smetana) (533), *O. legrosi* (Jarrige) (534), *O. solodovnikovi* Gildenkov (535), *O. kirschenblatti* sp. n. (536), *O. incognitus* sp. n. (537).

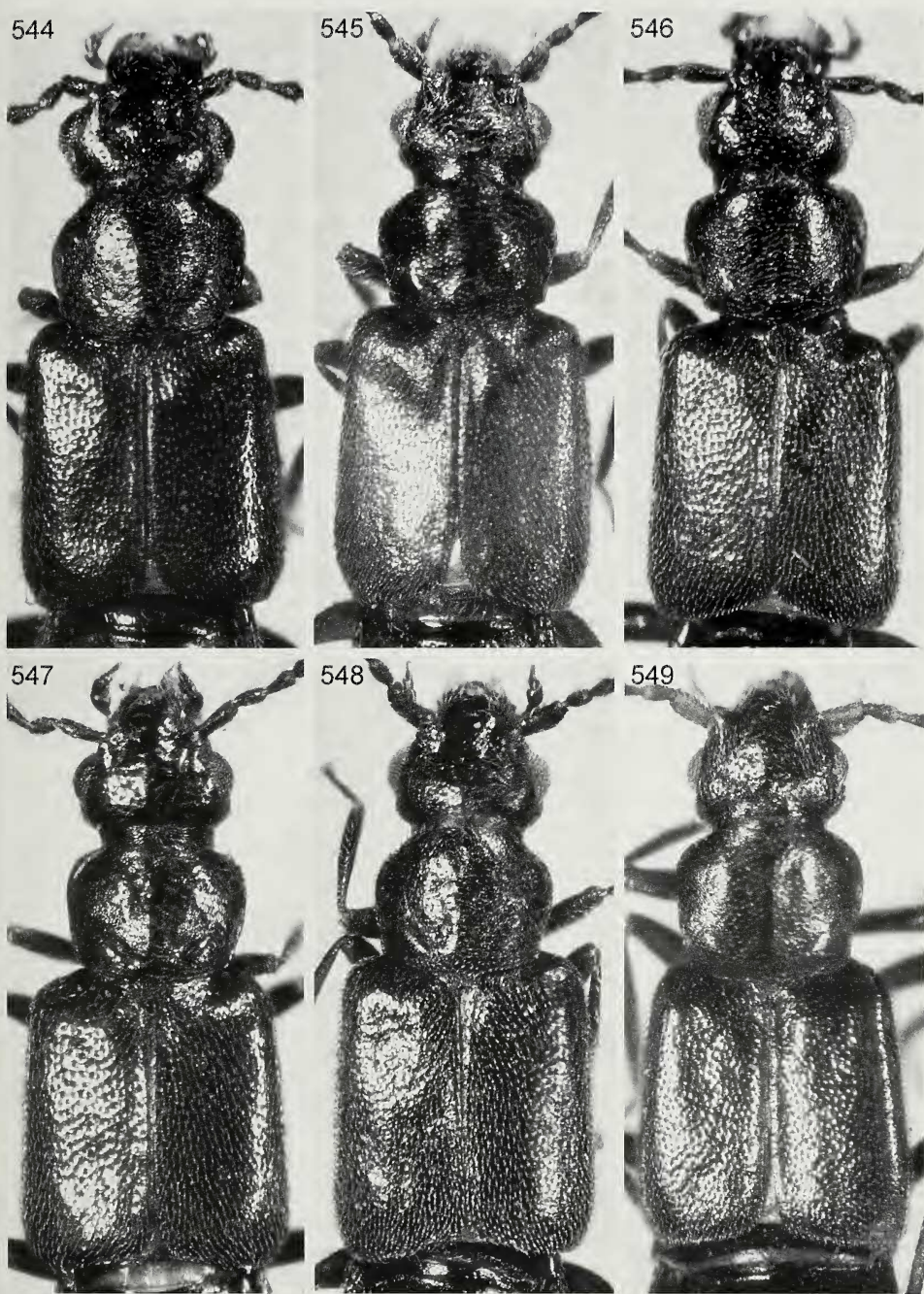
Eustace, MMUE (1). – ST, Coombes valley *+53.07/-01.99*, (III), MMUE (1). – Devon, Bow *+50.80/-03.81*, (VII), coll. Palm, MZLU (1), coll. Last, SEMC (1), coll. Last, MMUE (2). – Penrith *+54.65/-02.73*, coll. Sharp, BMNH (3). – EY, Scarborough (TA08) *+54.28/-00.43*, (XI), coll. Sharp and coll. G. C. Champion, BMNH (14). – Paisley (NS46) *+55.83/-04.42*, coll. Power, BMNH (4). – Sawley (SD74) *+53.88/-02.35*, (VIII), coll. Power, BMNH (1). – Chiddingfold *+51.10/-00.61*, (IV), coll. Donisthorpe and coll. Cameron, BMNH (6). – South Devon, Pridhamsleigh cave *+50.50/-03.75*, BMNH (1). – Somerset, Mendips, Manor Fm Swallet *+51.28/-02.64*, (VIII), BMNH (2). – Luccombe *+51.18/-03.56*, (IV), coll. Sharp and coll. G. C. Champion, BMNH (2). – Thornhill, Dumfries *+55.22/-03.77*, (V), coll. Sharp, BMNH (2). – SD, Budleigh-Salterton (SY08) *+50.63/-03.33*, coll. G. C. Champion, BMNH (13). – Brockenhurst *+50.78/-01.58*, (VI), coll. Sharp, BMNH (4). – Windsor Forest *+51.45/-00.61*, (IV), BMNH (1). – East Sussex, Barcombe Mills *+50.90/+00.03*, (XII), coll. C. J. Saunders, BMNH (1). – Devon, Bickleigh *+50.44/-04.10*, coll. G. C. Champion, BMNH (3). – Plymouth district *+50.40/-04.20*, coll. G. C. Champion and coll. Cameron, BMNH (6). – Devon, Exmouth *+50.62/-03.41*, coll. G. C. Champion, BMNH (1). – Derbyshire, Giants Hole (cave) *+53.37/-01.78*, (VI), BMNH (1). – Porlock *+51.21/-03.60*, (VI), coll. Cameron, BMNH (1). – Bramshaw district *+51.00/-01.60*, coll. Cameron, BMNH (1). – Plymouth, Marsh Mills *+50.38/+04.08*, (V), coll. G. C. Champion and coll. Andrewes, BMNH (2). — **SPAIN:** Pais Vasco, Hernani, Pergoaga, Rio Urumea (Es502d), 43°13.43'N, 1°55.53'W, 35m, (VI), coll. Vorst (1). – Solencia de Bastarás (cave), Huesca *+42.23/-00.14*, (VI), coll. Rambousek, NMPC (2). – Málaga, Tolox, Sima GESM *+36.68/-04.91*, (VII), coll. Assing (1). – Navarra, Pyrenees Navarra, Cave of Espinal, 900m *+42.98/-01.37*, (VII), coll. Schülke (4). – Pyren., Col d'Aras *+42.37/+02.45*, (X), coll. Lohse, MHNG (2). – Espinama (CA), Valle de Salvorón, Picos de Europa *+43.13/+04.81*, (VII), coll. Lohse, MHNG (4). – Navarra, Pyrenees Navarra, Bosque de Irati between Artzapar and Coll. Orión, 900m *+43.02/-01.10*, (VII), coll. Schülke (1). – Barcelona, Castellar del Valles *+41.62/+02.08*, (VI), MHNG (2). – Andalusia, MA, Jubrique, 500m *+36.57/-05.22*, (III), coll. Wunderle (1). – Burgos, C. Ojo Guareña *+42.35/-03.70*, (IV), MNMS (1). — **FRANCE:** Pyrenées Orientales, Massif du Canigou, 15km SSE Prades, route forestière du Cortalets, 850m *+42.50/+02.45*, (V), coll. Gusarov, ZMUN (6). – Ain, Grotte des Huguenots *+44.40/+04.40*, coll. Zanetti (1). – Alpes-Maritimes, Les Launes *+44.09/+06.97*, (IV), coll. Ochs, MHNG (5). – Alpes-Maritimes, Vallon de la Minière *+44.05/+07.57*, (X), coll. Ochs, MHNG (1). – Dpt. Pyrénées or., Sahorre b. Vernet *+42.53/+02.37*, (VII), coll. Lohse, MHNG (2). – Nice (Canal de la Vesubie) *+43.73/+07.18*, coll. Ochs, MHNG (1). – Alpes-Maritimes, St-Martin-du-Var *+43.82/+07.20*, (V), coll. Lohse, MHNG (1). – Var, Agay *+43.42/+06.86*, (XI), MHNG (1). – Hautes Prov., Annot l'Isle *+43.95/+06.65*, (VI), coll. Wunderle (1). – Lozère *+44.42/+03.76*, ISNB (5). – Sorèze *+43.45/+02.07*, in part coll. Scheerpeltz, NHMW (3). – Dept. Ardèche, SW Les Vans, Naves: Grotte Jean-Claude *+44.40/+04.13*, (IV), coll. Wunderle (2). – [Jura, Haute Chaîne,] Grotte du Crés, Salles la Su *+46.28/+05.99*, coll. Coiffait, MNHP (1). – Jura, Saint-Claude, Grotte des Foules *+46.39/+05.86*, coll. Coiffait, MNHP (6). – St. Martin-du-Var *+43.81/+07.20*, coll. Fauvel, ISNB (1). – Hérault, St. Guilhem *+43.73/+03.55*, ISNB (1). – Ecosse *+49.60/+00.33*, in part coll. Fauvel, ISNB (4). – Corse (Sud), Bocognano, cascade [du Voile de la Mariée] *+42.06/+09.05*, (V), coll. Dauphin (17). – Corse (Nord), Vizzavona, Ruisseau d'Omenino, 42°08'25.4"N, 9°08'55.0"E, 870m, (V), coll. Dauphin (1). – Corse, Vizzavona *+42.12/+09.13*, coll. Fauvel, ISNB (1). – Corse, Haut-Asco, 2020m am 2. see *+42.45/+09.03*, (VII), SDEI (1). – Corsica, Castagnica, Erbajolo *+42.27/+09.28*, (IV), coll. Wunderle (15), coll. Renner (1). – Corsica, Porto *+42.25/+08.72*, (V), coll. G. Benick, MHNG (3). – Corse, Ajaccio, in. Gravone *+41.91/+08.80*, (X), coll. Ochs, MHNG (1). — **BELGIUM:** Wavreille *+49.33/+05.38*, (VII-VIII), ISNB (5). – Ben Ahin *+50.51/+06.18*, (IV), ISNB (1). – Grotte de Remouchamps, Calypso & environs *+50.53/+05.54*, ISNB (3). – Rochefort, Trou du Nou Molin *+50.17/+05.13*, (VII and IX), ISNB (7). – Grotte de Han *+49.68/+05.53*, (VIII-X), ISNB (31). — **DENMARK:** København *+55.67/+12.58*, coll. Lindberg, MZHF (1). – rg. Munkbjerg *+55.69/+09.62*, (IV), coll. N. Høeg, ZMUC (1), coll. J. Andersen, ZMUC (1), coll. A. West, ZMUC (1). — **GERMANY:** Oberbayern, Farchant, Kuchflucht (cascade) *+47.53/+11.13*, (VI), coll. Lohse, MHNG (2), coll. Smetana, CNCI (2). – Sauerländ, Schmallenberg *+51.15/+08.28*, (VIII), coll. Renner (1). – Baden-Württemberg,



FIGS 538-543

Forebodies of *Ochtheophilus* species. *O. forticornis* (Hochhuth) (538), *O. strandi* (Scheerpeltz) (539), *O. andalusiacus* (Fagel) (540), *O. omalinus* (Erichson) (541), *O. szeli* sp. n. (542), *O. venustulus* (Rosenhauer) (543).

Urach, stream Alb *+48.00/+08.25*, (II), SMNS (1). – Falkensteiner Höhle, kleine halle direkt vor siphon, 450m *+48.52/+09.45*, (V), coll. Lohse, MHNG (1). – Erdmannshöhle, Hasel *+47.65/+07.90*, (V), MHNG (1). – Rheinland, Altenahr, Langfigtal *+50.52/+07.00*, (IV), coll. Wunderle (1). – Rheinland, Nahe, Heinzenberg, Kellerbachtal *+49.82/+07.48*, (V), coll. Wunderle (2). – Ufrungen, Heimkehle *+51.50/+10.99*, (IV, VII and XI), ZMHB (13), coll. Zerche, SDEI (1). – Wolftratshausen (Oberbayern), Isar *+47.92/+11.42*, (V), ZSMC (1). – Bad Wimpfen *+49.23/+09.13*, coll. Neumann, SMFD (2). — **SWITZERLAND:** Kt. Vaud, Saint-Sulpice *+46.51/+06.54*, (IV), coll. Toumayeff, MHNG (1). – Kt. Obwalden, Kaiserstuhl, Lac Lungern, 700m *+46.78/+08.16*, (VI), coll. Toumayeff, MHNG (7). – Kt. Bern, Hohgant (Mt.), 1800m *+46.78/+07.90*, (VI), coll. Kiener, MHNG (1). – Kt. Ticino, Morbio sup.[eriere] *+45.86/+09.02*, (IV), MHNG (1). – Kt. Genève, Chancy, La Laire Rau, 350m, 46°08'32"N, 5°58'53"E, (V), (HNHM) (1). – Kt. Genève, Chancy (15km SW Genf), la Laire, 350m *+46.15/+05.97*, (V-VI), coll. Gollkowski (1), coll. Rehous, MHNG (1). – Kt. Genève, Chancy *+46.15/+05.97*, (VIII), MHNG (3). – Kt. Solothurn, Solothurn *+47.23/+07.52*, (V-VI), coll. Rätzer, NMBS (6). – Lausanne *+46.53/+06.67*, (IV), coll. Fauvel, ISNB (1). – Neuchâtel, Môtiers, waterfall, 750m *+46.91/+06.60*, (IX), SDEI (3). — **AUSTRIA:** Vorarlberg, Bregenz, Hohenweiler, Bach Rohrach, 500m *+47.58/+09.78*, (V), coll. Gollkowski (2). – Vorarlberg, Hohenweiler, Rohrach, 590m *+47.58/+09.78*, (IV), coll. Kapp (2). – Vorarlberg, Feldkirch, Illspitz, 420m *+47.23/+09.60*, (V), coll. Kapp (1). – Vorarlberg, Hohenweiler, Ufer Rickenbach, 580m *+47.57/+09.77*, (IV), coll. Kapp (1). – Tirol, Lechtal, Elmen, Edelbach, 950-1000m *+47.33/+10.53*, (V), coll. Schülke (1). – Schandtauber höhle *+49.37/+10.18*, (III), coll. Lohse, MHNG (1). – Schafberg *+47.78/+13.45*, NHMW (2). – Allgäu *+47.40/+10.25*, coll. Neumann, SMFD (1). – Steiermark, Semriach, Lurhöhle *+47.22/+15.40*, (VIII and XI-XII), coll. Scheerpeltz, NHMW (4), coll. Ulbrich, SMNS (1). – N. Steiermark, Grasslhöhle (cave) in Dürntal bei Weiz *+47.25/+15.55*, (XII), coll. Spälti, MHNG (1). — **ITALY:** Borzonasca (GE), NE Chiavari *+44.42/+09.39* (V), coll. Lohse, MHNG (3). – Sardegna, Rio S. Girolamo, 550m *+39.83/+09.40*, (V), coll. Assing (1). – Piemonte (VC), Bachschlucht 1.5km W Rosazza / Cervo, 1300m *+45.68/+07.96*, (VIII), coll. Renner (1). – Gardasee-Gebiet, umgeb. Riva - Arco *+45.92/+10.89*, (VI), coll. Renner (1). – Brescia, Paitone, Bus del Fra *+45.56/+10.40*, (III), coll. Assing (1). – Friuli, Clauzetto, Grotta de Pradis, 600m *+46.23/+12.91*, (X), SMNS (2). – Friuli - Ven. Giul., Fella-Ufer W Carnia, 46°23'N, 13°07'E, 250m, (IX), coll. Schülke (1). – Grotta Luega [cave near Trieste] *+45.65/+13.78*, coll. Brasavola, MSNV (1). – alta Val d'Illasi (VR) (stream) *+45.38/+11.17*, (V), coll. Zanetti (1). – Confluenza Avisio - Adige (TN), 200m *+46.18/+11.08*, (VI), coll. Zanetti (1). – Cosizza dint. (UD), river Cosizza *+46.15/+13.55*, (V), coll. Zanetti (1). – Castagné (VR) (near Mezzane), 500m *+45.49/+11.11*, (VII), coll. Zanetti (16), HNHM (1). – Dint. Verona, Val Borago, bank *+45.53/+11.05*, (VI), coll. Zanetti (1). – Santuario di San Romedio (TN), 700m *+46.25/+11.08*, (VIII), coll. Zanetti (2). – Valle d. Tasso, Porcino-Caprino (VR) *+45.60/+10.78*, (IV), coll. Zanetti (2). – Carso (TS), Val Rosandra *+45.61/+13.80*, (V), coll. Zanetti (2). – Val Squaranto (VR), near Valdiporto, 500m *+45.48/+11.05*, (IX), coll. Zanetti (2). – Giazza (VR), in canyon, 1000-1200m *+45.65/+11.12*, (V), coll. Zanetti (2). – Longarone (BL), Provagna, 400m, bank of Piave *+46.27/+12.29*, (IV), coll. Zanetti (1). – Monte Baldo (TN), Madonna d. Neve *+44.78/+11.63*, (VI), coll. Zanetti (1). – Coredò (TN), bank of river Verdes, 1000m *+46.37/+11.08*, (VI), coll. Zanetti (4). – Imola *+44.35/+11.70*, NHMW (1), ISNB (1). – Genova *+44.42/+08.95*, (V), NHMW (5). – Genova, N. *+44.50/+08.95*, (V), ZMHB (2), ZSMC (1). – Apuane, Resceto (MS) *+44.09/+10.21*, (V), MHNG (2). – Sarteano (Toscana) *+43.00/+11.90*, coll. Neumann, SMFD (1). – Lucca *+43.83/+10.48*, coll. Reitter, HNHM (2). – Abruzzo (AQ), S. Demétrio, Grotta di Stiffe, 615m *+42.28/+13.56* (VI-VIII), HNHM (4), coll. Zanetti (4). – Carrara (Lucca) *+44.08/+10.10*, coll. Knirsch, FMNH (2), coll. Seidlitz, ZSMC (1). – Pian Del Tivano (Como) *+45.90/+09.16*, (VI), coll. Bernhauer, FMNH (3). – Torriglia *+44.52/+09.16*, (V), coll. Bernhauer, FMNH (1). – Parco Lessinia, near Pesciara di Bolca *+45.60/+11.20*, (VII), coll. Zanetti (1). – Fumane (VR), V. dei Progni, ca. 400m *+45.55/+10.88*, (V), coll. Tagliapietra (1). – V. Tramigna (VR), Finetti, ca. 500m *+45.40/+11.25*, (V), coll. Tagliapietra (18). – Veneto, Grotta di Ponte, Subiolo, Valstagna *+45.85/+11.65*, (I), MHNG (2). – Ligurischer Appenin, [Corte] Brugnattella *+44.72/+09.38*,



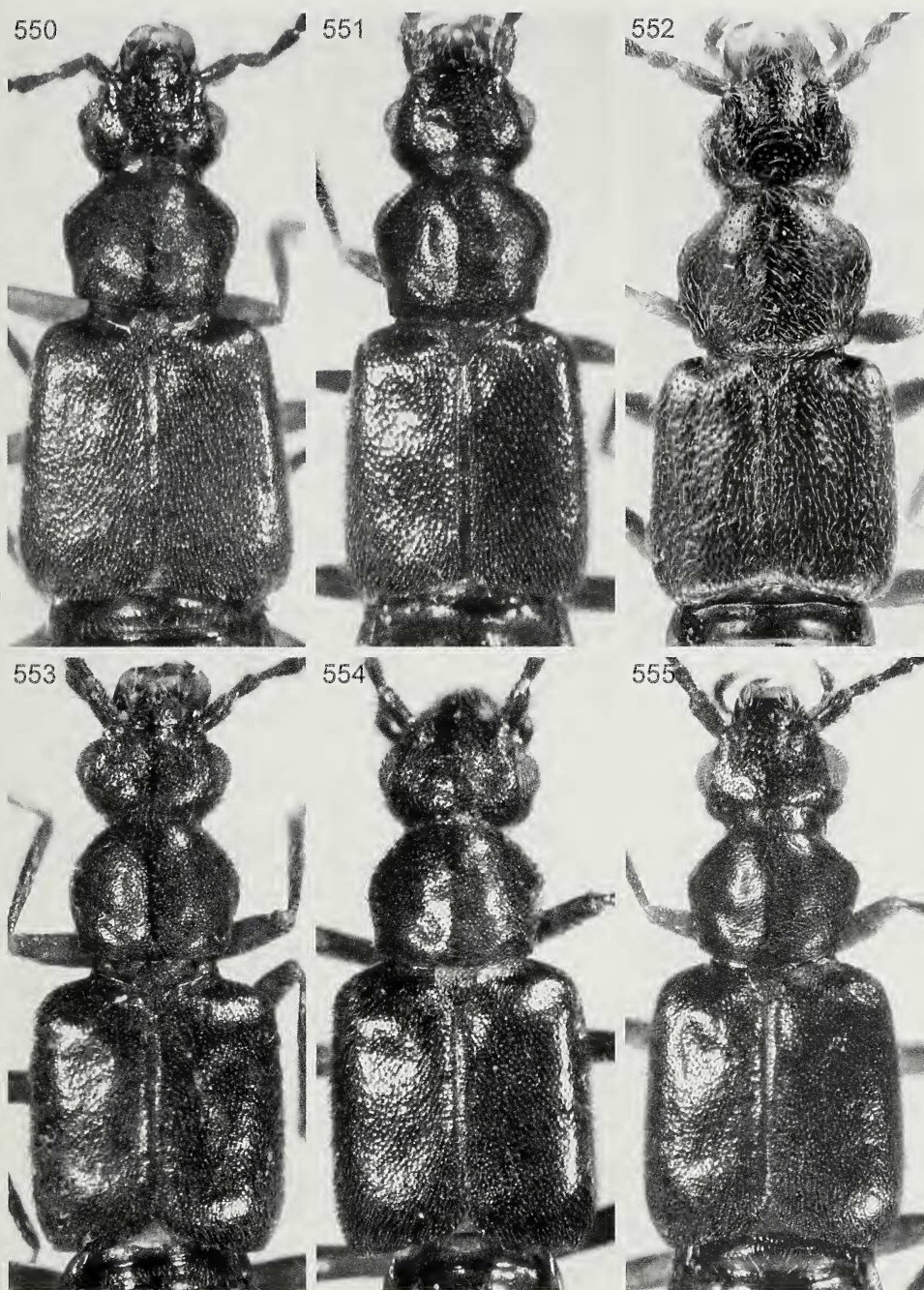
FIGS 544-549

Forebodies of *Ochtheophilus* species. *O. ashei* sp. n. (544), *O. gusarovi* sp. n. (545), *O. schuelkei* sp. n. (546), *O. nitidus* (Cameron) (547), *O. nepalensis* (Scheerpeltz) (548), *O. hammondi* sp. n. (549).

(VII), coll. Lohse, MHNG (1). – Liguria or., Rocchetta di Vara, 900-950m *+44.25/+09.77*, (VI), MCSN (1). – Resceto, Alpi Apuane *+44.10/+10.22*, (V), coll. Mancini, MCSN (3). – Arni, Alpi Apuane *+44.07/+10.25*, (V), coll. Mancini, MCSN (1). – M. Tambura, Alpi Apuane *+44.12/+10.23*, (V), coll. Mancini, MCSN (9), MSNV (3). – Badia Prataglia, Prov. Arezzo *+43.78/+11.87*, (VI), coll. Binaghi, MCSN (2). – Chizzola *+45.78/+11.00*, coll. Fauvel, ISNB (1). – Abruzzo, Maiella, Val Foro, 650m *+42.21/+14.14*, (V), coll. Kapp (1). – Abruzzo, Maiella, Lettomanopello, Fosso Sant'Angelo, 680m *+42.22/+14.02*, (V), coll. Kapp (2), HNHM (1). – Lazio, Carpineto Romano (RM), Piana Faggio, 1200m *+41.58/+13.09*, (V), coll. Zanetti (1). – Lazio, Carpineto (Romano), grotta Pozzo Comune *+41.58/+13.09*, (V), coll. Zanetti (1). – Ins. Elba *+42.76/+10.28*, coll. Bernhauer, FMNH (1). – Sicily, Monti Peloritani, Ponte (ME), F. so Buzzuratti *+38.08/+15.50*, (V), coll. Adorno (4). – Sicily, Monti Peloritani, Santa Lucia del Mela (ME), V. ne Ferra, cascade Sghiccia Saitta, 540m *+38.15/+15.28*, (VI), coll. Adorno (5). – Sicily, Monti Peloritani, Mongiuffi-Melia (ME), T. Bottaro c/o Madonna della Catena, 560m *+37.92/+15.27*, (VI), coll. Adorno (5). – Sicily, Monti Peloritani, Limina (ME), 570m *+37.93/+15.27*, (XI), coll. Adorno (1). – Messina (Sicily) *+38.18/+15.56*, (V), coll. Scheerpeltz, NHMW (1). – Sardinia: Sorgono *+40.02/+09.10*, coll. Bernhauer, FMNH (1). – Sardinia, Allai Dopì *+39.95/+08.87*, (V), coll. Binaghi, MCSN (1). — **SLOVENIA**: Notranisko-kraška, Postoina, 45°44'25"N, 14°06'33"E, 580m, cave, (IX), coll. Assing (3), HNHM (2). – Postojna - Belsko, Osojca 749, cave *+45.82/+14.16*, (IV-X), coll. Assing (1). – Sajeveče, Ponikve pri Sajevečah 903 *+45.74/+14.11*, (IX), coll. Assing (24). – Nova Kracina *+45.49/+14.31*, (VI), coll. Zanetti (1). – Maribor *+46.55/+15.65*, coll. Peyer, PMSL (1). – Carnia, Adelsberg [= Postojna], Crna Jama [cave] *+45.26/+19.26*, coll. Rambousek, NMPC (1). — **CZECH REPUBLIC**: Máhrisches Grotten bei Brünn [Brno] *+49.20/+16.63*, MZHF (1). – Ochos(er)-Höhle (Mähr-Schweiz) *+49.25/+16.75*, coll. Bernhauer, FMNH (2). – Adamstaler (Moravia) *+49.30/+16.65*, coll. Bosch, SMFD (2). – Sloup, Moravia *+49.42/+16.75*, coll. Krogh, SMFD (1), coll. Stenius, MZHF (1), coll. Roubal, SNMC (1), coll. Skalitzky, NHMW (1), coll. Bernhauer, FMNH (1), coll. Künemann, SDEI (1), coll. Binaghi, MCSN (1). — **CROATIA**: Castelnuovo *+42.45/+18.53*, NHMW (1). — **BOSNIA-HERZEGOVINA**: Herzegovina, Nevesinje *+43.27/+18.12*, NHMW (1). – Stolac *+43.08/+17.96*, coll. Bernhauer, FMNH (1). – Velež-Planina., Utrčnik Höhle *+43.33/+18.00*, (IX), coll. Reitter, HNHM (4), coll. Lindberg, MZHF (1), in part coll. Kaufmann, NHMW (2), SDEI (7), coll. Paganetti, MHNG (1), coll. Rambousek, NMPC (1). – Pazarić, Krupa-Thal *+43.80/+18.15*, coll. Bernhauer, FMNH (1). – Mostar, Blato [Mostarsko Blato] *+40.33/+17.69*, (V), coll. Lokay, NMPC (1). — **MACEDONIA**: Negorci W., Vall. du Sermenli Deresi *+41.18/+22.48*, (VI), ISNB (1). — **ALBANIA**: Valona *+40.53/+19.42*, (III), coll. Scheerpeltz, NHMW (1). – Alban. mer., Terbacì [Tërbaçi] *+40.25/+19.65*, (V), MHNG (1). — **GREECE**: Evrytania peripheral unit, Anatoliki Fragista, small river + stream N of village, 38°57.577'N, 21°36.750'E, 550m, HNHM (6). – Kalávryta, Morea *+38.03/+22.12*, coll. Breit, NHMW (1). – Pelion, Thessalien *+39.40/+23.03*, NHMW (1). – Voidia, Pelop., 1500-1927m *+38.20/+21.90*, (V), coll. Scheerpeltz, NHMW (3). – Morea, Andritsena *+37.48/+21.90*, (V), ISNB (9). – Morea, Taygetos, Gorge de Lagada *+37.10/+22.30*, (V), ISNB (1), coll. Breit, NHMW (1). – Creta occ., Vallée Keramaris [Kerames?], 300m *+35.17/+24.52*, (IV), ISNB (1). — **TURKEY**: umg. Manavgat, Yaylaalan, 850m *+36.95/+31.48*, (XII), coll. Wunderle (4). – Antalya, umg. Manavgat, 900m [Yaylaalan] (7) *+36.93/+31.47*, (XII), coll. Assing (5), HNHM (1).

Ochtheophilus biimpressus (Mäklin, 1852)

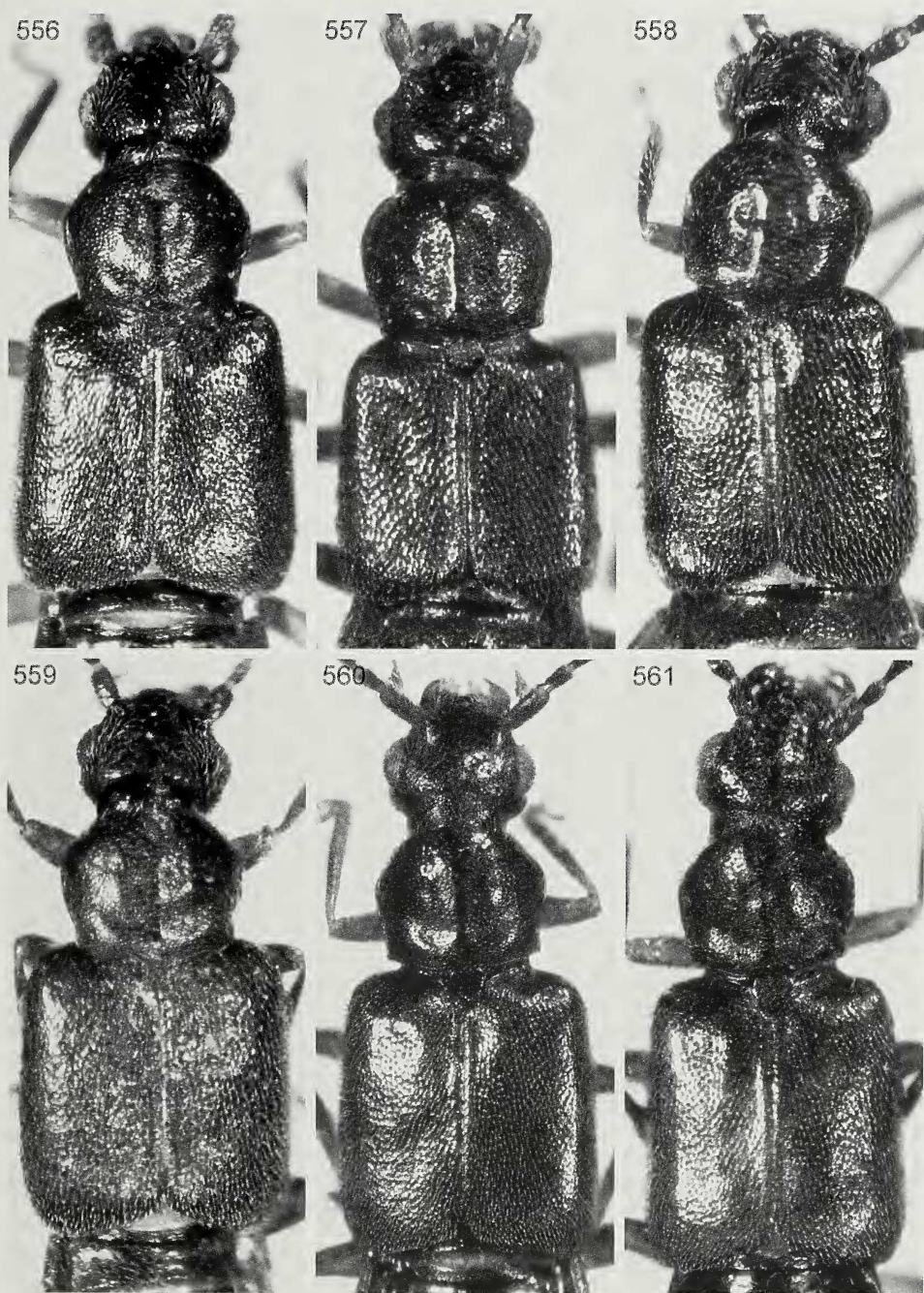
NON-TYPE MATERIAL EXAMINED: **USA**: WASHINGTON: King Co., Black Diamond (2mi E) *+47.32/-121.95*, (VI), FMNH (1). – King Co., Seattle, Discovery Park *+47.66/-122.42*, (II), CNCI (101). – Clallam Co., Olympic N. P., Soleduck Campground, 1640' *+47.95/-123.81*, (VIII). – CNCI (3), Clallam Co., Olympic N. P., Hurricane Ridge Road, 4000' *+47.99/-123.44*, (VII), CNCI (4). – Clallam Co., Olympic N. P., Olympic Hot Springs, Boulder Creek, 2200-2500' *+47.97/-123.71*, (VII), CNCI (1). – Clallam Co., Olympic N. P., Olympic Hot Springs, Boulder Creek Campground, 2200' *+47.97/-123.72*, (VIII), CNCI (1). – Clallam Co., La Push *+47.91/-124.64*, (V), CNCI (1). – Clallam Co., 6mi E Joyce *+48.14/-123.62*, (V), CNCI (1). – Clallam Co., 1.6mi E Joyce, near Ramapo *+48.14/-123.69*, (VII),



FIGS 550-555

Forebodies of *Ochtheophilus* species. *O. ketmenicus* (Kashcheev) (550), *O. itoi* sp. n. (551), *O. loebli* sp. n. (552), *O. nigerrimus* (Cameron) (553), *O. hammondi* sp. n. (554), *O. vulgaris* (Watanabe & Shibata) (555).

AMNH (1). – Lewis Co., 6.4mi W Randle near Stiltner Creek, 1200ft *+46.55/-122.10*, (VII), AMNH (1). – Jefferson Co., Olympic N. P., Hoh Ranger Station, 600' *+47.86/-123.92*, (V and VIII), CNCI (4). – Jefferson Co., Olympic N. P., Queets Ranger Station *+47.62/-124.02*, (V), CNCI (1). – Jefferson Co., Olympic N. P., 13mi S Port Angeles, 4000' *+47.90/-123.45*, (VIII), CNCI (5). – Jefferson Co., Olympic N. P., 0-3.4mi SW Hoh [peak], 400-500' *+47.77/-123.85*, (VII), FMNH (2), HNHM (1). – Pierce Co., Mt. Rainier N. P. at Carbon River *+46.97/-121.82*, (VI), FMNH (2). – Pierce Co., Mt. Rainier N. P., 4.7mi W Longmire, 2200' *+46.74/-121.90*, (VII), FMNH (3). – Pierce Co., Mt. Rainier N. P., 1.6mi SW Paradise, 5000' *+46.76/-121.76*, (VII), FMNH (1). – Pierce Co., Mt. Rainier N. P., West Side Road, 1.7mi N Jct Wash706, 2400' *+46.77/-121.97*, (VII), FMNH (2), HNHM (1). – Pierce Co., Mt. Rainier N. P., 2mi W Jct Wash706 & Wash123, 2600' *+46.75/-121.57*, (VII), FMNH (1). – Pierce Co., Mt. Rainier N. P., Wash706 at Nisqually River, 3900' *+46.78/-121.76*, (VII), FMNH (1). – Pierce Co., Mt. Rainier N. P., Nisqually River, 3900' *+46.78/-121.76*, (VIII), CNCI (4). – Pierce Co., Mt. Rainier N. P., Nisqually River, 4000' *+46.79/-121.76*, (V), CNCI (49), HNHM (3), MSNV (1). – Pierce Co., Mt. Rainier N. P., N. Puyallup River, 3700' *+46.85/-121.91*, (VIII), CNCI (7). – Pierce Co., Fairfax *+47.01/-122.01*, (VI), FMNH (8). – Mt. Baker National Forest, Mt. Baker Track, 4100' *+48.76/-121.86*, (VIII), CNCI (1). – Whatcom Co., Mt. Baker National Forest, Bagley Creek, nr. Silver Fir Campground, cca. 2000' *+48.92/-121.70*, (VII), CNCI (1). – Whatcom Co., Mt. Baker, 4mi N Silver Fir Camp, 4000' *+48.97/-121.70*, (VIII), CNCI (5). – Jct. N84 & N90, 77km S Randle, 4000' *+45.75/-122.00*, (VIII), CNCI (3). – Issaquah *+47.55/-122.02*, (V), coll. Downie, FMNH (2). – OREGON: Douglas Co., Smith River *+43.74/-124.08*, (V), AMNH (1), Coos Co., Charleston *+43.34/-124.32*, (VIII), coll. Malkin, AMNH (1). – Mt. Hood, Timberline Lodge Road, 4500-5000' *+45.33/-121.71*, (VI), CNCI (2). – Clackamas Co., Mt. Hood, Timberline Lodge Road, 4500-5000' *+45.33/-121.71*, (VI), CNCI (2). – Tillamook Co., 4mi SE Blaine Siuslaw Nat. For. along Nestucca River, 500' *+45.21/-123.63*, (III), CNCI (11). – Tillamook Co., rest area Wilson River Hwy., 0.5mi S, 1mi W Lee's Camp, 700' *+45.59/-123.56*, (XI), CNCI (10). – Curry Co., 4mi S, 4mi E Port Orford, Middle Elk Road, 800' *+42.72/-124.47*, (V), CNCI (2). – Columbia Co., Old Pittsburg Road, 2mi E Pittsburg *+45.90/-122.13*, (IV), CNCI (2). – Benton Co., Cannibal Mountain Peak *+44.35/-123.84*, (VIII), CNCI (3). – Benton Co., waterfalls on Mary's Peak, Cst. Range, 20mi SE Philomath, 3500' *+44.45/-123.48*, (V), CNCI (2). – Benton Co., Mary's Peak, 8mi SE Philomath, 4000' *+44.50/-123.55*, (V), CNCI (1). – Benton Co., 14mi WSW Philomath, N slope of Mary's Peak, Mulkey Creek, 1500ft *+44.54/-123.55*, (VII), AMNH (1). – Benton Co., 14mi WSW Philomath, NE slope of Mary's Peak, Chintimini Creek, 2000ft *+44.52/-123.53*, (VII), AMNH (1). – Coos Co., 10mi E, 2mi S Allegany, Weyerhaeuser Comp. Millicana Tree Farm, Comp. Rd. 5046 *+43.40/-123.78*, (XI), CNCI (1). – Lane Co., Dolly Varden For. Campground, 1100' *+43.96/-122.62*, (III), CNCI (1). – Clatsop Co., 3mi N, 11 mi W Elsie, beside gravel pit US-76, 200' *+45.91/-124.19*, (III), CNCI (11). – Clatsop Co., N. Fork Klaskanine River, bridge, Hwy. Ore. 202, app. 5mi SE Olney, 500' *+46.06/-123.71*, (XI), CNCI (1). – Lincoln Co., 0.6mi NW Elk City, Yaquina River, 200' *+44.63/-123.89*, (XII?), CNCI (1). – Clackamas Co., 46mi SE Estacada, For. Serv. Rd. 5738, 3006' *+44.90/-121.81*, (X), CNCI (3). – Clackamas Co., Camp Creek, 3.5mi SE Rhododendron, 2300-2400' *+45.30/-121.86*, (VI), CNCI (2). – Clackamas Co., 1.5mi S Jct US26 / Ore35, 3500' *+45.28/-121.76*, (VII), FMNH (1). – Clackamas Co., Wildwood Rec. Site, near Wildwood, 1100' *+45.36/-121.99*, (VII), FMNH (1). – Douglas Co., 3mi NE Scottsburg *+43.66/-123.80*, (XII), CNCI (1). – Linn Co., Tombstone Prairie, Santiam Pass *+44.40/-121.85*, (VIII), CNCI (1). – MONTANA: Glacier Co., Glacier N. P., Two Medicine Lake *+48.48/-113.38*, (VII), coll. Van Dyke, CNCI (1). – CALIFORNIA: Mendocino Co., Mendocino *+39.31/-123.80*, (IV, X-XI), coll. Last, MMUE (2), CNCI (12), coll. Steel, BMNH (1), coll. Downie, FMNH (1), coll. Scheerpeltz, NHMW (1), HNHM (1), Trinity Co., 12mi W Coffee Creek, Shasta National Forest, 3400' *+41.14/-123.16*, (VII), CNCI (1). – COLORADO: San Juan Co., 2-3mi S Silverton, 9,900-10,000ft *+37.78/-107.66*, (VIII), AMNH (2). — CANADA: BRITISH COLUMBIA: Vancouver Island, 5km NNE Courtenay, Seal Bay, 49°45'49"N, 124°58'17"W, (X), CNCI (20). – Vancouver Island, 4km W Glenora, Cowichan River Provincial Park [48°45'39"N, 123°48'09"W], (X), CNCI (3). – Vancouver Island, French Beach Provincial Park, 48°23'N, 123°56'W, (VII), CNCI (2). – Vancouver Island, 4km SW Bamberton, Spectacle Lake,



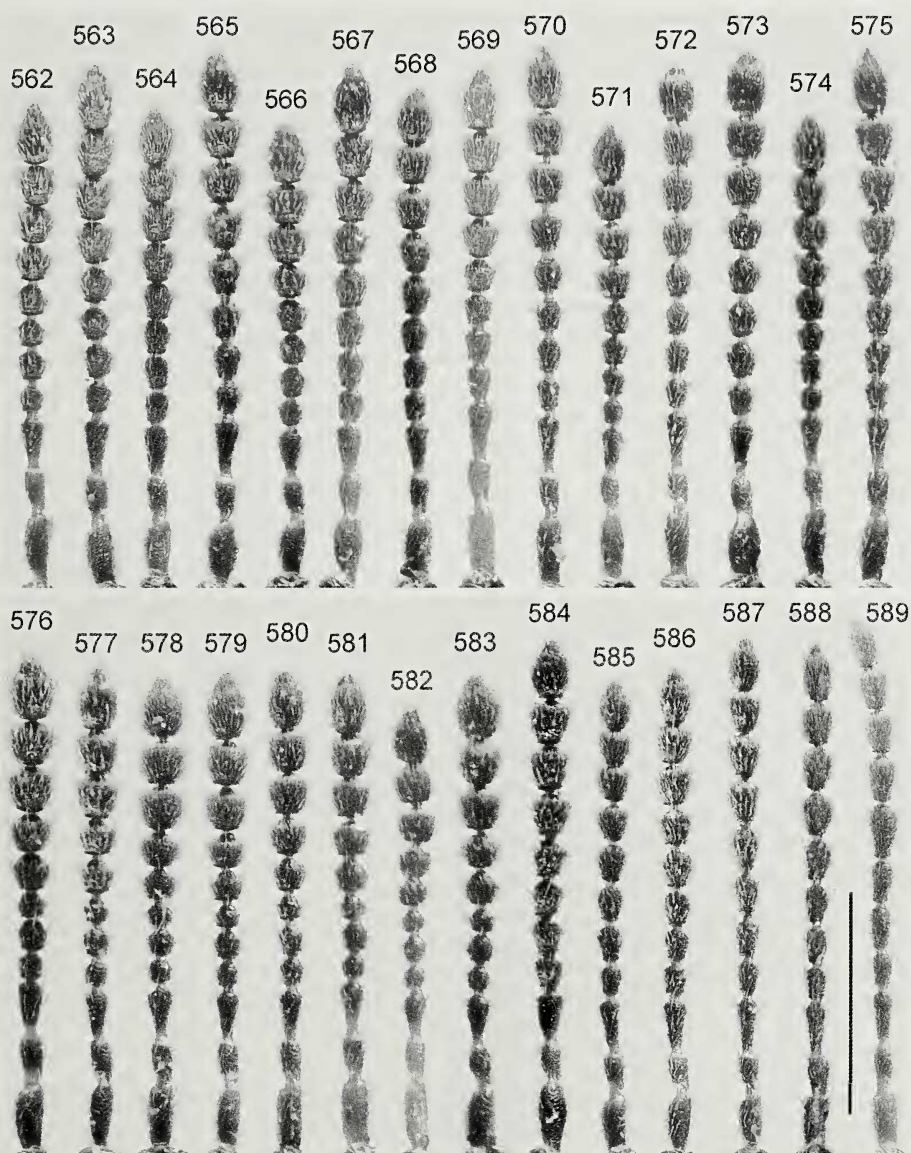
FIGS 556-561

Forebodies of *Ochtheophilus* species. *O. monticola* (Cameron) (556), *O. basicornis* (Cameron) (557), *O. proximus* (Cameron) (558), *O. zerchei* sp. n. (559), *O. szarukani* sp. n. (560), *O. merkli* sp. n. (561).

48°34'41"N, 123°34'19"W, (X), CNCI (14). – Vancouver Island, 3km SW Brentwood Bay, 48°33'12"N, 123°29'36"W, (X), CNCI (1). – Vancouver Island, Kapoor Road, 17km W Shawnigan Lake, 48°39'22"N, 123°51'37"W, (X), CNCI (5). – Duncan, Mt. Tzouhalem, 48°47'N, 123°37'W, (X), CNCI (35). – 13km SW Parksville, Englishman River Falls [49°14'50"N, 124°21'06"W], (X), CNCI (2). – Kitsumkalum Lake at Hwy13, S of Rosswood, 54°47.34'N, 128°45.97'W, 146m, (VII), CNCI (1). – Metlakatla *+54.33/-130.45*, (VII and X), MCZN (24), coll. Bernhauer, FMNH (1). – Terrace *+54.52/+128.60*, (XI), coll. C. A. Frost, MCZN (2), coll. Blackwelder, AMNH (1). – Bella Coola (Hwy 20), niveau mer *+52.37/-126.77*, (VII), MHNG (12). – Hope (Hwy 1), Silver Hope Creek, 3km S Hope, 150m *+49.34/-121.47*, (VII), MHNG (3). – Hagensborg (Hwy 20) *+52.39/-126.57*, (VII), MHNG (4). – 6.2km S Terrace, 6km E Hwy 25 *+54.46/+128.50*, (VIII), CNCI (3). – 6.2km S Terrace, 7.6km E Hwy 25, Copper Mt. *+54.46/+128.47*, (VIII), CNCI (14). – 6.2km S Terrace, 1km E Hwy 25, Copper Mountain Road *+54.46/+128.52*, (VIII), CNCI (3). – Shames River, 21km W Terrace, 2km N Hwy 16 *+54.42/+128.88*, (VIII), CNCI (31). – Pacific Rim N. P., Michigan Creek *+48.72/-125.07*, (VII), CNCI (1). – Forbidden Plateau, McPhee Lake, 3700' *+49.70/-125.37*, (VII), CNCI (1). – Forbidden Plateau, Murray Meadows, 3400' *+49.70/-125.33*, (VII), CNCI (5). – Courtney Forbidden Plateau, near Courtney Lookout *+50.01/-120.60*, (VII), CNCI (3). – Heather Mountain, Cowichan Lake, 4400' *+48.87/-124.26*, (VII), CNCI (12). – 14mi N Squamish, Mt. Garibaldi, 4000' *+49.92/-123.22*, (V), CNCI (6). – 9mi N Squamish, Mt. Garibaldi, 1500' *+49.85/-123.22*, (V), CNCI (4). – Diamond Head Trail, Garibaldi Peak, nr. Squamish, 3200ft *+49.70/-123.15*, (VIII), CNCI (1). – Prince Rupert, Mt. Hays, 1000-2000' *+54.28/-130.32*, (VI), CNCI (3). – Queen Charlotte Islands, Moresby Is., Mt. Moresby, 2100' *+53.02/-132.08*, (VII), CNCI (31). – Queen Charlotte Islands, Moresby Is., Tekakia Lake, 2100' *+53.17/-131.87*, (VII), CNCI (8). – Queen Charlotte Islands, Lyell Is., Gate Creek *+52.67/-131.47*, (VIII), CNCI (8). – Queen Charlotte Islands, Talunkwan Is., 1km W Heming Head *+52.83/-131.75*, (VIII), CNCI (1). – Queen Charlotte Islands, Tlell River, end of Richardson Road, 50' *+52.60/-131.93*, (VIII), CNCI (2). – Queen Charlotte Islands, Graham Is., Kiusta *+54.17/-133.02*, (VIII), CNCI (3). – Queen Charlotte Islands, Moresby Is., Kaisun, 10ft *+53.03/-132.45*, (VIII), CNCI (2). – Queen Charlotte Islands, 1km W Moresby Camp, Pallant Creek *+53.05/-132.03*, (VIII), CNCI (2). – Queen Charlotte Islands, Graham Is., Mt. Needham, 2600' *+53.25/-132.27*, (VII), CNCI (2). – Queen Charlotte Islands, Tanu Is., Tanu *+52.77/-131.62*, (VIII), CNCI (2). – Queen Charlotte Islands, 7.3km NW Rennell Sound Rd, Ghost Main Rd., 800' *+53.43/-132.28*, (VII), CNCI (7). – Queen Charlotte Islands, 7.3km NW Rennell Sound, Ghost Creek drainage, Ghost Main Rd., 800' *+53.44/-132.28*, (VIII), CNCI (17). – Queen Charlotte Islands, Moresby Island, Mount Moresby, west slope at High Goose Lake, 640m (#83-58A and #83-57C) *+53.01/-132.10*, (VII), coll. Kavanaugh, CASC (14), HNHM (3). – Queen Charlotte Islands, Graham Island, Ghost Creek drainage, 7.3km NW Rennell Sound Road, 240m (#83-49) *+53.44/-132.28*, (VII), coll. Kavanaugh, CASC (2), HNHM (1). – Queen Charlotte Islands, Graham Island, Slatechuck Mountain, east slope, 430m (#83-31) *+53.26/-132.22*, (VII), coll. Kavanaugh, CASC (1). – Queen Charlotte Islands, Graham Island, 0.2km E Kiusta village site, 8m (#83-109) *+54.18/-133.02*, (VIII), coll. Kavanaugh, CASC (2). – Queen Charlotte Islands, Graham Island, 19km E Masset on Tow Hill Road, 10m (#83-29B) *+54.05/-131.87*, (VII), coll. Kavanaugh, CASC (2). – Queen Charlotte Islands, Lyell Island, at mouth of Gate Creek, 3-10m (#83-89B) *+52.66/-131.47*, (VIII), coll. Kavanaugh, CASC (1). – Massett *+54.02/-132.15*, (III), coll. C. A. Frost, MCZN (1). – 1.4km S Massett *+54.02/-132.11*, (VII), CNCI (2). – Vancouver *+49.83/-126.00*, (X), coll. Palm, MZLU (1). – ALBERTA: Jasper, Whistler Cataract *+52.84/-118.12*, coll. Cameron, BMNH (4). – Jasper, Whistler Creek *+52.85/-118.09*, coll. Cameron, BMNH (1).

Ochtheophilus columbiensis (Hatch, 1957)

NON-TYPE MATERIAL EXAMINED: USA: WASHINGTON: Wellington *+48.26/-118.08*, (VII), coll. Wickham, USNM (1). – Skamania Co., Mt. St. Helens, Spirit Lake, Bear Creek, 3200' *+46.27/-122.16*, (VII), CNCI (1). – Skamania Co., Mt. St. Helens, creek above Spirit Lake, 3700' *+46.26/-122.17*, (VII), CNCI (1). – Skamania Co., Mt. St. Helens, Timberline Road, 3800' *+46.25/-122.19*, (VII), CNCI (1). – Clallam Co., 6mi E Joyce *+48.14/-123.62*, (V), CNCI (1). – Clallam Co., Olympic N. P., Olympic Hot Springs, Boulder Creek, 2200-2500'



FIGS 562-589

Antennae of *Ochtheophilus* species. *O. tatricus* (Smetana) (562), *O. brachypterus* (Jeannel & Jarrige) (563), *O. merkli* sp. n. (564), *O. zerchei* sp. n. (565), *O. columbiensis* (Hatch) (566), *O. itoi* sp. n. (567), *O. vulgaris* (Watanabe & Shibata) (568), *O. flexuosus* Mulsant & Rey (569), *O. lenkoranus* (Scheerpeltz) (570), *O. wunderlei* sp. n. (571), *O. rosenhaueri* (Kiesenwetter) (572), *O. planus* (LeConte) (573), *O. praepositus* Mulsant & Rey (574), *O. aureus* (Fauvel) (575), *O. gusarovi* sp. n. (576), *O. nitidus* (Cameron) (577), *O. ashei* sp. n. (578), *O. strandi* (Scheerpeltz) (579), *O. omalinus* (Erichson) (580), *O. andalusiacus* (Fagel) (581), *O. venustulus* (Rosenhauer) (582), *O. forticornis* (Hochhuth) (583), *O. solodovnikovii* Gildenkov (584), *O. monticola* (Cameron) (585), *O. szarukani* sp. n. (586), *O. championi* (Bernhauer) (587), *O. nigerrimus* (Cameron) (588), *O. emarginatus* (Fauvel) (589). Scale bar = 1.0 mm for 589, 0.8 mm for 585-588, 0.7 mm for 584, 0.6 mm for 562-575, 0.5 mm for 576-583.

+47.97/-123.71, (VI-VII), CNCI (4), FMNH (1). – Pierce Co., Mt. Rainier N. P., Laughingwater Creek, 2400' *+46.75/-121.53*, (VIII), CNCI (1). – Pierce Co., Mt. Rainier N. P., Nisqually River, 4000' *+46.77/-121.78*, (V), CNCI (1). – Pierce Co., Mt. Rainier N. P., Berkeley Park, 3.5mi W Sunrise, 6700' *+46.92/-121.68*, (VIII), CNCI (1). – Pierce Co., Mt. Rainier N. P., Fryingpan Creek, 3800' *+46.87/-121.66*, (VIII), CNCI (2). – Pierce Co., Mt. Rainier N. P., West Side Road, 3.3mi N Jct Wash 706, 2800' *+46.77/-121.92*, (VII), FMNH (11), HNHM (1). – Spokane Co., Mt. Spokane State Park, Mt. Kit Carson Loop Road, 4500' *+47.92/-117.14*, (VIII), CNCI (5). – Skagit Co., 20mi W Mazama, Rainy Pass, 4900' *+48.59/-120.95*, (VIII), CNCI (2). – Whatcom Co., 18mi E Glacier, 3200ft *+48.89/-121.55*, (VII), AMNH (4). – OREGON: Clackamas Co., Mt. Hood National Forest, Trillium Lake Campground, 3600' *+45.27/-121.74*, (VII), FMNH (1). – Clackamas Co., 1.5 mi S Jct US26 & Ore35, 3500' *+45.28/-121.76*, (VII), FMNH (14), HNHM (2). – Hood River Co., Cloud Cap Road, Tilly Jane Creek, 4100' *+45.41/-121.64*, (VI), CNCI (3). – Hood River Co., Mount Hood National Forest, Umbrella Falls, 6000' *+45.33/-121.66*, (VII), CNCI (4). – Hood River Co., Mount Hood National Forest, Sahalie Falls, 4500' *+45.32/-121.64*, (VII), CNCI (1). – Deschutes Co., N. Fork Squaw Creek, Three sisters Wilderness, 5900' *+44.46/-121.37*, (VII), CNCI (7). – Grant Co., Strawberry Range, Strawberry Lake, 1920m (NA 987) *+44.31/-118.68*, (V), CNCI (3). – Grant Co., Malheur National Forest, Strawberry Campground, 5800' *+44.27/-118.71*, (VII), CNCI (13), ZMHB (1), HNHM (2). – Grant Co., Malheur National Forest, Dixie Springs, 7km NW Hwy. 26, For. Rd. 2610, 6700' *+44.60/-118.69*, (VII), CNCI (1). – Wallawa Co., 24km S Lostine, Lostine River, 5200' *+45.28/-117.39*, (VII), CNCI (1). – IDAHO: Blaine Co., Sawtooth National Forest, Prairie Creek, Hwy. 75 *+43.95/-114.65*, (VII), CNCI (4). – Elmore Co., Boise National Forest, Cold Spring Campground, 7900' *+43.19/-115.37*, (VII), CNCI (1). – Franklin Co., Hillyard Canyon *+42.14/-111.63*, (VIII), FMNH (3). – Challis National Forest, Twin Creek Forest Camp, 5000ft *+44.58/-114.45*, (VII), FMNH (1). – MONTANA: Gallatin Co., Beaver Creek, 23mi NNW West Yellowstone, 6500ft *+44.97/-111.25*, (VII), AMNH (1). – Missoula Co., 1.5mi SW Lolo Hot Springs, Lee Creek, 4200ft *+46.71/-114.56*, (VII), AMNH (3). – Mineral Co., 6mi W Saltese, c. 4000' *+47.40/-115.63*, (VII), FMNH (1). – Park Co., Beartooth Prim. Area, Goose Lake, 10,500' *+45.12/-109.91*, (VIII), CNCI (14). – WYOMING: Yellowstone N. P., Canyon, top of Lower Falls *+44.75/-110.46*, (VII), coll. Darlington, MCZN (2). – NEVADA: Lander Co., 16mi S Austin, Big Creek Canyon, 7100ft *+39.25/-117.08*, (VI), AMNH (5). – UTAH: Cache Co., Logan Canal, 2km N Wood Camp, 5600' *+41.82/-111.64*, (VII), CNCI (1). – COLORADO: Ouray Co., Box Canyon Falls, Ouray, 7800ft *+38.02/-107.68*, (VII), AMNH (3). – San Juan Co., Lime Creek, 6mi S Molas Pass, 5600' *+37.72/-107.70*, (VII), CNCI (1). – Eagle Co., 6km NW Dotsero, Deep Creek, 6700' *+39.68/-107.09*, (VII), CNCI (6). – Delta Co., Hwy 65, 11km NW jnct. For. Rd. 100, Grand Mesa N.F., 9400ft *+39.10/-108.15*, (VII), CNCI (12). – ALASKA: 8mi NW Haines *+59.36/-135.53*, (VII), CNCI (35), HNHM (2). – Glacier Bay Nat. Mon., 5mi S Lituya Bay, Steelhead Creek, 0-20m *+58.58/-137.55*, (VIII), coll. Kavanaugh, CASC (3). — CANADA: YUKON TERRITORY: Little Salmon Lake *+62.17/-134.67*, (VIII), CNCI (1). – BRITISH COLUMBIA: Driftwood Canyon Provincial Park, 54°49.65'N, 127°01.41'W, 752m, (VII), CNCI (1). – Ksan Historic Village near Hazelton, 55°14.95'N, 127°40.64'W, 218m (VII), CNCI (1). – Manning Provincial Park, 20mi E Hope *+49.38/-120.87*, (VI), CNCI (8), Manning Provincial Park, Derek Falls, 4000' *+49.07/-120.93*, (VII), CNCI (33). – Manning Provincial Park, Gibson Pass, 4500' *+49.07/-120.88*, (VII), CNCI (2). – Manning Provincial Park, Three Brothers Mountain, 7000' *+49.17/-120.77*, (VII), CNCI (1). – Yoho N. P., Otterhead River, 5500' *+51.33/-116.58*, (VIII), CNCI (1). – Yoho N. P., Amiskwi River, 6000' *+51.38/-116.55*, (VIII), CNCI (38). – Yoho N. P., valley of Hagen Peak *+51.58/-116.72*, (VIII), CNCI (11). – Prince Rupert, Mt. Hays, 1000-2000' *+54.28/-130.32*, (VI), CNCI (6). – Mt. Begbie, 7000' *+50.88/-118.25*, (VIII), CNCI (1). – Slide Mt., 10mi E Barkerville, 4500' *+52.67/-121.87*, (VI), CNCI (11). – 20mi E Hope *+49.38/-120.87*, (VI), CNCI (7). – 12mi E Hope *+49.38/-121.21*, (VI), CNCI (2). – 21mi W Creston *+49.10/-116.95*, (VI), CNCI (6). – 8mi W Creston *+49.10/-116.68*, (VI), CNCI (22), HNHM (2). – 6mi SW Pine Summit *+55.44/-122.69*, (VII), CNCI (4). – mi56 Haines Hwy., Three Guardsmen Pass, 3200' *+59.62/-136.47*, (VII), CNCI (3). – 7mi E Terrace *+54.52/-128.41*, (VI), CNCI (11). – 12mi E Terrace *+54.52/-128.23*, (VI), CNCI (1). – 2mi S Salmo *+49.17/-117.28*, (VI), CNCI (6).

– 30mi W Alberni *+49.26/-125.47*, (V), CNCI (14), HNHM (1). – Squamish *+49.70/-123.15*, (VIII), CNCI (1). – Kootenay N. P., Kimpton Creek, 4000' *+50.65/-115.97*, (VII), CNCI (6). – Kootenay N. P., Sinclair Creek, 5000' *+50.64/-116.09*, (VI), CNCI (2). – Mt. Revelstoke N. P., Miller Lake, 6300' *+51.07/-118.10*, (VIII), CNCI (4). – Garibaldi Provincial Park, Mimulus Creek, 4500' *+49.95/-123.03*, (VIII), CNCI (3). – Garibaldi Provincial Park, Diamond Head Trail, 3500' *+49.76/-123.05*, (VII), CNCI (1). – 34mi W Invermere, Jumbo Creek, 5500' *+50.35/-116.40*, (VIII), CNCI (3). – 8mi N Lumby, 2mi E Trinity Valley Field Station, [800m] *+50.42/-118.89*, (VII), CNCI (1). – Ymir *+49.29/-117.21*, (VI), CNCI (1), HNHM (1). – Alta Lake, 2200' *+49.23/-125.65*, (VIII), CNCI (1). – Two Sisters Mt., 15mi E Barkerville, 4500' *+53.20/-121.53*, (VI), CNCI (1). – Queen Charlotte Islands, Moresby Island, Mount Moresby, west slope at High Goose Lake, 640m (#83-57A) *+53.01/-132.10*, (VII), coll. Kavanaugh, CASC (5). – Queen Charlotte Islands, Moresby Island, Mount Moresby, 2100' (#83-37, #83-38, #83-40) *+53.03/-132.10*, (VII), CNCI (38). – Queen Charlotte Islands, 4.7km N Rennell Sound Rd., Ghost Creek, 700ft (#83-24) *+53.37/-132.33*, (VII), CNCI (1). – Queen Charlotte Islands, 7.9km NW Q.C. City, Skowkona Creek, 500ft (#83-55B) *+53.32/-132.15*, (VII), CNCI (4). – Queen Charlotte Islands, Slatechuck Mt., Tarundl Creek, 1900ft (#83-6) *+53.26/-132.23*, (VII), CNCI (5). – King Island, southeast shore of Codville Lagoon, 3-80m, 52°03'N, 127°51'W (#86-35) *+52.05/-127.85*, (VIII), coll. Kavanaugh, CASC (1). – ALBERTA: Jasper National Park, Miette Hot Springs, Sulphur Creek, 4500ft *+53.13/-117.78*, (VII), AMNH (3). – Waterton Lakes N. P., Rowe Creek Track, 5300' *+49.06/-113.99*, (VI), CNCI (1). – Waterton Lakes N. P., Rowe Creek Track, 6500' *+49.06/-114.02*, (VI), CNCI (3). – Waterton Lakes N. P., Rowe Lakes Track, 6400' *+49.06/-114.02*, (VI), CNCI (9). – Waterton Lakes N. P., Rowe Creek, 5400ft *+49.06/-114.02*, (VIII), CNCI (9). – Waterton Lakes N. P., Rowe Creek, 5460ft *+49.06/-114.03*, (VIII), CNCI (11), BMNH (30). – Waterton Lakes N. P., Lineham Creek Track, 5900-6500ft *+49.08/-114.03*, (VIII), CNCI (6). – Waterton Lakes N. P., Crypt Lake, 6500' *+49.00/-113.84*, (VI), CNCI (1). – Waterton Lakes N. P., Cameron Lake, 5450' *+49.02/-114.05*, (VI), CNCI (2). – Waterton Lakes N. P., Cameron Lake, 5400' *+49.02/-114.05*, (VIII), CNCI (1). – Waterton Lakes N. P., Upper Rowe Lake, 7100' *+49.05/-114.06*, (VI), CNCI (2). – Waterton Lakes N. P., Lower Bertha Falls, 4800' *+49.04/-113.90*, (VI), CNCI (11). – Banff *+51.18/-115.57*, (VI), coll. Bernhauer, FMNH (2). – Banff N. P., Boom Lake, 6000' *+51.25/-116.06*, (VIII), CNCI (1). – Banff N. P., Hidden Lake, 7500' *+51.48/-116.11*, (VIII), CNCI (1). – Banff N. P., Mt. Temple, ski lodge, 6600' *+51.35/-116.22*, (VIII), CNCI (7). – Banff N. P., Ptarmigan Mt., 8500' *+51.50/-116.08*, (VII), CNCI (1). – Banff N. P., Ptarmigan Lake, 7500' *+51.48/-116.07*, (VII-VIII), CNCI (9). – Banff N. P., Consolation Lake, 6400-7000' *+51.32/-116.16*, (VI), CNCI (2). – 11mi SW Banff, Healy Creek *+51.06/-115.73*, (VIII), CNCI (7). – Marmot Creek Basin, 10mi SW Kananaskis F. E. S., 6500' *+50.95/-115.13*, (VII), CNCI (1). – Kananaskis F. E. S., Lusk Creek, *+51.03/-115.03*, (VII), CNCI (2). – Kananaskis F. E. S., 6000' *+51.05/-115.03*, (VII), CNCI (1). – Highwood Pass, 35mi S Kananaskis F. E. S., 7800' *+50.58/-115.00*, (VII), CNCI (6). – Highwood Pass, 7600' *+50.59/-115.00*, (VIII), CNCI (2),

Ochtheophilus emarginatus (Fauvel, 1871)

NON-TYPE MATERIAL EXAMINED: **MOROCCO**: [Marrakech,] Urika [Ourika] *+31.40/07.78*, HNHM (1), NHMW (1). – [Marrakech,] Oued el Mris *+31.40/-08.25*, HNHM (1). – Mojen Atlas, Berkine, Oued Zobzit, 1260' *+34.05/-03.76*, (V), coll. Jarrige, MNHP (1). — **MOROCCO/WESTERN SAHARA**: 'Sahara Marocain', Hi Majaz, Daou-ra [Daora] *+27.38/-12.95*, (V), coll. Jarrige, MNHP (1). — **SPAIN**: Arnedillo *+42.22/-02.23*, MNMS (1). — **FRANCE**: Lourdes *+43.10/-00.05*, coll. Fauvel, ISNB (2). – Pyrénées orientales, Bourg-Madame *+42.43/+01.93*, NHMW (1). – Pyrénées orientales, Amélie les Bains, torrent *+42.47/+02.67*, coll. Eppelsheim, NHMW (1), coll. Fauvel, ISNB (2). – Digne (Bléone) *+44.10/+06.23*, coll. Bernhauer, FMNH (1). – Nizza [Nice] *+43.70/+07.27*, coll. Neumann, SMFD (1). – Var, Aiguines *+43.77/+06.24*, (III), coll. Ochs, MHNG (3). – Alpes-Maritimes, inond. Vésubie *+43.86/+07.20*, (XI and XII), coll. Ochs, MHNG (2). – Verdaches, BA. *+44.26/+06.34*, (VIII), coll. Ochs, MHNG (1). — **ITALY**: Pedemonte *+45.93/+08.42*, SMNS (1). – Lombardia, Montecaprarò *+44.73/+09.15*, in part coll. Skalitzy, NHMW (4). – Abruzzo, Gran Sasso *+42.45/+13.70*, ZMHB (1). – Bazzano *+44.50/+11.08*, (VI-VII and

IX), NMPC (1), coll. Reitter, HNHM (4), coll. Roubal, SNMC (1). – Valsugana (Trentino) *+45.98/+11.75*, (VI), coll. Hütter, ZSMC (1), SDEI (2), UWCP (1). – Montecaprarò *+44.73/+09.15*, (IX), coll. Bernhauer, FMNH (1), SDEI (2). – Civezzano (Trentino) *+46.10/+11.20*, (VI), coll. Bosch, SMFD (1), SDEI (1), coll. Scholz, UWCP (3). — **AUSTRIA**: Albeinser Bach near Brixen (S Tirol) *+47.45/+12.25*, (IV and VI), ZSMC (2), coll. Burlini, MSNV (2). — **CROATIA**: Dalmatien, Strmiča, ufer des Butižnica *+44.17/+16.25*, (IX), coll. Stöcklein via Frey, NHMB (1), HNHM (1). — **BOSNIA-HERZEGOVINA**: Makl[j]en[-pass]] *+43.82/+17.61*, (V and VI), SDEI (2), coll. Cameron, BMNH (2). — **BULGARIA**: Kazanlük *+42.63/+25.40*, coll. Bernhauer, FMNH (1). – Mac., Mittl. Struma [Струма], Kresana-Defilé [Кресненско дефи́ле] *+41.73/+23.16*, (VI) coll. Jörger, NHMB (1). — **MACEDONIA**: Ochrid-See, Ufer *+41.18/+20.68*, (VII), coll. Scheerpeltz, NHMW (1). — **GREECE**: Veluchi *+36.63/+22.40*, NHMW (1). – Fhtiotis, SW Lamía, Inachos, river bank (9), 38°49'31"N, 22°04'58"E, 470m, (IV), coll. Assing (1). — **TURKEY**: Taurus, Bolkar Daglari, umg. Ciftehan, ca. 1500m *+37.52/+34.77*, (VI), coll. Gollkowsky (1). – Antalya, Köprülü-Kanyon, 1km N Beskonak (051), 37°11'14.4"N, 31°10'47.3"E, 178m, (III), coll. Rose (2). – prov. Kars, Aras-Fluss, Kağızman - Karakurt (67) *+40.05/+42.83*, (VI), NHMW (27), HNHM (2). – prov. Erzurum, Oulur - Tortum (75) *+40.30/+41.63*, (VI), NHMW (2). – Anatolia, Sultan Dağı, 2000m *+38.97/+27.43*, (IX), exp. N. Mus. ČSR, NMPC (3), coll. Smetana, CNCI (4). – Anatolia, Bürücek, Toros *+37.35/+34.83*, (VII), exp. N. Mus. ČSR, NMPC (2). – Istanbul *+41.03/+28.95*, coll. Kraatz, SDEI (1). — **RUSSIA**: Krim, Iaila-Gebirge *+44.53/+34.12*, coll. Scheerpeltz, NHMW (1). – Caucasus, Naltshik [Нальчик], zip. fl. *+43.48/+43.62*, (IX), ZMUM (1). — **GEORGIA**: Mzchete [Mtskheta] pr. Tbilisi, Aragvi [Aragvi, river] *+41.84/+44.71*, (VI), ZMHB (1), coll. Schülke (1). – Lagodekhi, Lagodekhi Nature Reserve *+41.81/+46.27*, (VII), coll. Gusarov, ZMUN (1). — **ARMENIA**: Araxesthal *+38.90/+46.02*, coll. Reitter, HNHM (2). — **AZERBAIJAN**: Нахичеванская АССР, 4км ниже Билава, горный ручей, влажн, щебень *+39.56/+45.16* (V), coll. Petrenko (4), HNHM (2). – [Нахичеванская АССР,] Орлудад на Араксе *+38.90/+46.04* (V), ZISP (1). — **IRAN**: Tehran, 36km W Firuz-Kooh *+35.76/+52.50*, (VI), USNM (1). – Khurasan, 5km E Bojnurd *+37.48/+57.33*, (IV), USNM (3). – prov. Kerman [Löföfler 3398] *+30.28/+57.08*, NHMB (1). – Khorasan Razni prov., Shandiz env. (stream valley), 36°19.6'N, 59°11.1'E, 1780m, (V), MNPC (1). — **AFGHANISTAN**: SE, Khurd-Kabul, v. Kabul, 1900m *+33.42/+69.11*, (VI), NHMW (3), HNHM (1).

Ochtheophilus flexuosus Mulsant & Rey, 1856

NON-TYPE MATERIAL EXAMINED: **PORTUGAL**: Estremadura, Serra de Montejunto, 2km N Alcoentre, 100m *+39.20/-08.95*, (VII), BMNH (1). — **SPAIN**: Madrid, Lozoyuela, Sieteiglesias, Arroyo Jobalo (Es418), 40°54.28'N, 3°34.52'W, (VI), coll. Vorst (2). — **FRANCE**: Var, St. Aygulf, in. Argens *+43.42/+06.71*, (XI), MHNG (2), HNHM (1). – Var, Roquebrune, in. Argens *+43.45/+06.64*, (XI), MHNG (2), HNHM (1). – Le Crotoy, Somme *+50.21/+01.62*, MHNG (1). – Bordeaux, Garonne (river) *+44.85/-00.57*, (XII), coll. Tempère, MHNG (1). – Vienne, R. Gartemp, La Brussière *+46.65/+00.84*, (VI), coll. Lott, BMNH (1). – Vienne, Les Bourielles *+46.34/+00.63*, (XII), coll. Rambousek, NMPC (1). – Nîmes *+43.84/+04.36*, (II), coll. Kouřil, NMPC (1). – Haute-Savoie, Frangy *+46.02/+05.93*, (X), MHNG (8). – Languedoc-Roussillon, Nîmes *+43.83/+04.35*, (II), in part coll. Ulbrich, SMNS (2). – Alpes-Maritimes, inond. Loup *+43.63/+07.15*, (I and III-V), coll. J. Ochs, MHNG (7), coll. Burlini, MSNV (1), coll. Dauphin (3). – Calvados *+49.17/-00.50*, coll. Fauvel, ISNB (1). – Bords de l'Odon, Verson *+49.15/-00.45*, coll. Fauvel, ISNB (1). – Boulogne *+50.71/+01.61*, coll. Fauvel, ISNB (1). – Tarbes *+43.23/+00.08*, ISNB (1). – Hérault, La Salvetat *+43.91/+03.27*, ISNB (1). – Millau *+44.10/+03.08*, (IV), coll. Ochs, MHNG (1). – Saint Médard d'Eyrans *+44.72/-00.50*, (IX), coll. Tempère, MHNG (1). – Caen *+49.18/-00.35*, in part coll. Fauvel, ISNB (4). – Morgon, Lyon *+46.17/+04.68*, coll. De Fréminville - Guillebeau, MHNH (3), coll. Sharp, BMNH (1), coll. Kraatz, SDEI (5). – Nîmes *+43.83/+04.35*, (II), coll. Bosch, SMFD (4), coll. Reitter, FMNH (1). – Hyères *+43.12/+06.12*, coll. Eppelsheim, NHMW (1), coll. L. v. Heyden, SDEI (2). – Alpes-Maritimes, Villeneuve-Loubet *+43.65/+07.12*, NHMW (2), coll. Bernhauer, FMNH (3). – Var, Fréjus *+43.43/+06.73*, coll. De Fréminville - Guillebeau, MHNH (1), coll. Rey, MHNH (1),

NHMG (1). — dept. Landes (nord), Belhade, débris crue Petite Layre *+44.38/-00.68*, (II and XII), MHNG (8), coll. Dauphin (1). — dept. Lot-et-Garonne, Sos, rives Gueyze *+44.04/-00.14*, (V), coll. Dauphin (1). — dept. Haute-Savoie, Bonneville *+46.08/+06.40*, (VI), coll. Dauphin (1). — **BELGIUM**: Houtem/Houthem L. *+50.95/+04.46*, (V-VI), ZSMC (1), coll. Lindberg and coll. Stenius, MZHF (2), coll. van der Wiel, MMUE (1). — **LUXEMBOURG**: Luxembourg, Septfontaines, Eisch (Lx9), 49°41.64'N, 6°00.06'E, (VI), coll. Vorst (2). — **HOLLAND**: Gelderland, Winterswijk, Bekendelle (V1800), 51°56.5'N, 6°42.0'E, (VI), coll. Vorst (1). — Limburg, Herkenbosch, Roer (V3111), 51°08.90'N, 6°02.60'E, (VI), coll. Vorst (1). — Valkenburg-L *+50.86/+05.82*, (I), coll. Kiener, MHNG (1). — **GERMANY**: Hessen, Marburg, Cappel *+50.78/+08.77*, (III), coll. Zerche, SDEI (2). — Baden-Württemberg, Messtischblatt, luftfang, Kreis Schwäbisch Hall - Fichtenberger Rot zwischen Neusägmühle und B14 *+49.10/+09.73*, (IV), SMNS (1). — Baden-Württemberg, Züttlingen, stream Jagst *+49.30/+09.33*, (VI), coll. Papperitz, SMNS (1). — Inde (stream) *+50.78/+06.23*, (III), coll. Bernhauer, FMNH (1). — Nahe *+53.80/+10.13*, (VI), coll. Bosch, SMFD (1). — Münster a. St. Nahe *+49.73/+07.88*, (VI), coll. Scheerpeltz, NHMW (1), SDEI (3), coll. v. d. Trappen, SMNS (1). — München, Grünwald *+48.06/+11.52*, (VI), coll. Ihssen, ZMHB (1). — Aachen J. *+50.80/+06.10*, (III), coll. Ihssen, ZMHB (2). — Aachen *+50.76/+06.10*, (III and VI), MZHF (1), ZMHB (1), coll. Roubal, SNMC (4), coll. Steel, BMNH (1), coll. Cameron, BMNH (1), in part coll. Scheerpeltz, NHMW (8), coll. Bosch, SMFD (3), coll. Bernhauer, FMNH (1), ZSMC (1), SDEI (10), coll. Spälti, MHNG (1). — **SWITZERLAND**: Kt. Genève, Allondon, les Bailleys *+46.20/+06.00*, (II, V and X), MMUE (1), MHNG (8). — Kt. Genève, Chancy, La Laire Rau, 350m, 46°08'30"N, 5°58'38"E, (V), (HNHM (2). — Kt. Genève, Chancy, La Laire Rau, 350m, 46°08'32"N, 5°58'53"E, (V), (HNHM (5). — Kt. Genève, la London (river) *+46.17/+06.02*, (IV, VI and X), in part coll. Toumayeff, MHNG (13). — Kt. Genève, Malval, la London *+46.21/+05.99*, (I and VI), MHNG (6).

Ochtheophilus forticornis (Hochhuth, 1860)

NON-TYPE MATERIAL EXAMINED: **NORWAY**: Kåfjord, Lyngen *+69.92/+20.20*, (VI), exp. Münster, ZMUN (5). — **RUSSIA**: Kamtschatka, Bolscherjetsk [Kavalerskoye] *+52.92/+156.58*, (VII), MZHF (1). — Khabarovskiy kray, Badshalskiy range, end of river Omot-Makit, taiga, 850m *+50.58/+134.32*, (VII), coll. Schülke (1). — Primorskij Kraj, Lazovskij Distr., river Elomovskiy [= Primorye Terr., S Sikhote-Alin ridge, Partizansky ridge, Lysaja mt., Elamovsky river], 650m *+43.26/+133.70*, (VII), coll. Pütz (34). — South Primorye, Lazovskij district, Lazo *+43.38/+133.90*, (VII), coll. Shavrin (2). — Primorie, Schutzgebiet Lazovskij, Kl. S-j. Log *+43.36/+133.87*, (VI), coll. Schülke (1). — Приморский край, Хасанский район, заповедник Кедровая Падь, *+43.14/+131.61*, (VII-VIII), ZMUM (2). — Ussuri-Gebiet, Rajon Partizansk, Poworotnaja-Tal *+42.68/+133.03*, (VI), ZMHB (42). — Primorsk, Ussuriysk, Kaimanovka [Каймановка], 150-300m *+43.63/+132.22*, (VII), ZMUM (1). — Primorskij Kray, Sikhote-Alin, Biol. Stat., 30km SE Chuguyevka, 44°05'N, 134°12'E, 650m, (V-VI), SDEI (25). — Quellgebiet des Irkut *+52.12/+100.87*, coll. Kraatz, SDEI (2), in part coll. Skalitzky and coll. Eppelsheim, NHMW (7). — Бурятская АССР, курорт Аршан, *+51.95/+102.50*, (VII-VIII), coll. Shavrin (3). — N-Cisbaikalia, Buryatia, Baikal Mts., Kurkula [Куркула] river, 55°05'52.0"N, 108°55'33.9"E, 725m, (VII), coll. Shavrin (2). — Khamar-Daban Mts., Komarinskij Mts., middle flow of Slyudyanka Riv., 51.587736°N, 103.630056°E, (VII), coll. Shavrin (1). — хребет Хамар-Дабан, верховья реки Осиновки, 1500 м *+51.50/+104.71*, (VII), coll. Shavrin (1). — Красноярский край, Саян-Шушенский заповедн., р. Большие Уры близ устья р. Оттуг-Суук [Krasnoyarsk Territory, Yermakovskiy District, Sayano-Shushenskij Biosphere Reserve, Bolshiye Ury River basin near Ottug-Suuk (= Otuk-Sug) river mouth, 51°59'N, 91°38'E] (V), HNHM (1). — Transbaikalia, Chita Area, Kyrenskiy District, Bal'dzha river, 49°17'54.4"N, 110°09'20.8"E, 1432m, (VIII), coll. Shavrin (2). — **CHINA**: Gansu, Xinlong Shan, cca. 70km S Lanzhou, 2225-2380m *+35.07/+103.76* (C32), (VII), MHNG (1\$), Shanxi, Wutaishan *+39.07/+113.58*, (VI), coll. Rougemont, OXUM (6), Beijing, Xizolongmen *+40.25/+116.50*, (VI), coll. Rougemont, OXUM (1), Qinghai Prov., Daban Shan, 62km NW Honggu, creek valley, 36°51'15-28"N, 102°36'34"-37°07"E, 2236-2350m (CH11-09e), (VII), coll. Schülke (1\$). — **MONGOLIA**: Гоби-Алтайский аймак, 25км ЮВ айма. Алтая (Юсун-Булака), *+46.23/+96.50*, (VII), ZISP (1). — Bayanhongor, 17км Ю Шине-Джинста. горы.

родник *+44.50/+99.27*, (VI), coll. Yanushev via M. Gildenkov (2). – Bajanchongor aimak, Changaj [Khangay] Gebirge, Somon Zag am fluss Zag [3ar] Gol, 2100m (709) *+47.11/+99.12*, (VII), exp. Kaszab, HNHM (5), coll. Smetana, CNCI (1). – Uvs aimak, am Fluss Baruunturuun gol neben Somon Baruunturuun [Баруунтуруун], 1280m (1012) *+49.65/+94.38*, (VI), exp. Kaszab, HNHM (1). – Bayan-Ölgiy aimak, im Tal des Flusses Chavcalyn gol, 24km O von Somon Cagannur [Tsagaanuur, Цагаануур], 1890m (1043) *+50.11/+105.81*, (VI), exp. Kaszab, HNHM (2), coll. Smetana, CNCI (1). — **SOUTH KOREA:** Jeju-do, Seogwipo-si *+33.25/+126.56* (II), CNUK (1). — **JAPAN:** Honshu, Gunma pref., Konsei Pass, ca. 1800-1900m *+36.81/+139.35*, (VIII), BMNH (1). – Honshu, Gunma pref., Mt. Hotaka (foot), ca. 1300m *+36.78/+139.16*, (VIII), BMNH (1 ♂, 1 ♀). – Iwate pref., Kawara-bo, Mt. Hayachine *+39.45/+141.42*, (VI), coll. Naomi, KUEC (3). – Tokushima pref., Mt. Tsurugi *+33.85/+134.10*, (VI), coll. Naomi, KUEC (1). – Tottori pref., Mt. Daisen *+35.37/+133.54*, (VI), coll. Naomi, KUEC (3). – Gifu pref., Hirayu *+36.15/+137.50*, (VI), coll. Naomi, KUEC (1). – Tochigi pref., Nikko, Nikko Yumoto *+36.81/+139.41*, (VI), coll. Naomi, KUEC (1). – Gunma pref., Marunuma *+36.80/+139.36*, (VII), coll. Naomi, KUEC (43). – Yamanashi pref., Jigokudani, Mt. Yatsu *+35.88/+138.51*, (VII), coll. Naomi, KUEC (3). – Yamanashi pref., Mt. Daibosatsu, Kaminikkawa pass *+35.72/+139.00*, (VII), coll. Naomi, KUEC (31). – Yamanashi pref., Hirogawara, Mt. Shirane *+35.66/+138.30*, (VII), coll. Naomi, KUEC (16). – Nara pref., Ohdaigahara *+33.91/+135.86*, (VI), coll. Naomi, KUEC (7). – Ehime pref., Mt. Odami [Odamiyama] *+33.54/+132.85*, (VI), coll. Naomi, KUEC (4). – Hokkaido, Mt. Hakken-zan *+42.96/+141.31*, (VI), coll. Naomi, KUEC (1). – Kyoto pref., Ashiu [Natural Forest] *+35.31/+135.72*, (VI), coll. Ito (3). – Nara pref., Mt. Ohdai *+33.91/+135.86*, (V and VI), coll. Ito (4). – Nara pref., Dorogawa *+34.27/+135.88*, (V), coll. Ito (3). — **USA:** OREGON: Baker Co., Pine Creek near Baker, Blue Mountains *+44.82/-118.08*, (VI), FMNH (34). – Grant Co., E of Prairie City, Blue Mountains, E of Dixie Pass, Lunch Creek (2 mi W), c. 5000ft *+44.58/-118.44*, (V-VI), FMNH (3). – Curry Co., Humbug Mountain State Park *+42.69/-124.43*, (VII), FMNH (2). – Clackamas Co., Mt. Hood National Forest, Still Creek Campground, 3700' *+45.30/-121.77*, (VII), FMNH (1). – IDAHO: Blaine Co., Sawtooth National Forest, Prairie Creek, Hwy. 75 *+43.95/-114.65*, (VII), CNCI (2). – Idaho Co., 20.7mi WSW Lolo Pass, Squaw Creek, 3150ft *+46.49/-114.84*, (VII), AMNH (49). – MONTANA: Missoula Co., 27mi WSW Lolo, West Fork Lolo Creek, 4200ft *+46.71/-114.53*, (VII), AMNH (10). – Missoula Co., 1.5mi SW Lolo Hot Springs, Lee Creek, 4200ft *+46.71/-114.54*, (VII), AMNH (5). – Carbon Co., Palisades Campground, 3mi W Red Lodge, 5400' *+45.17/-109.31*, (VIII), CNCI (1). – CALIFORNIA: Trinity Co., Shasta National Forest, Deadfall Creek, 7000' *+41.32/-122.51*, (VII), CNCI (1). – El Dorado Co., 3mi E Kyburz, 5500' *+38.78/-120.24*, (VIII), CNCI (1). – Siskiyou Co. 5.4mi SE Seiad Valley, O'Neil Creek, 1500ft *+41.81/-123.12*, (VI), AMNH (16). – Alpine Co. 26.5mi NE Strawberry (Tuolumne Co.), near Clark Fork River, 6400ft *+38.58/-119.69*, (VII), AMNH (5). – Tuolumne Co. 33km NE Starwberry, near Deadman Creek, 8900ft *+38.32/-119.70*, (VII), AMNH (1). – NEVADA: Lander Co., 16mi S Austin, Big Creek Canyon, 7100ft *+38.15/-115.72*, (VI), AMNH (1). – Lander Co., 17mi S Austin, Big Creek Canyon, 7400ft *+38.14/-115.72*, (VI), AMNH (1). – White Pine Co., 8mi W Baker, Baker Creek Camp[ground], 7700ft *+38.99/-114.24*, (VIII), AMNH (1). – UTAH: Washington Co., SE of Pine Valley National Forest, Trail 16, Earl Spring, 7100' *+37.38/-113.55*, (VI), AMNH (34). – Garfield Co., Henry Mts., Lonesome Beaver, 7500' *+38.12/-110.75*, (VII), CNCI (1). – Manti-LaSal National Forest, Warner Campground, 9200' *+38.52/-109.28*, (VII), BMNH (7). – COLORADO: Delta Co., Hwy 65, 11km NW jct. For. Rd. 100, Grand Mesa N.F., 9400ft *+39.10/-108.15*, (VII), CNCI (1). – Eagle Co., 6km NW Dotsero, Deep Creek, 6700' *+39.68/-107.09*, (VII), CNCI (2). – Montezuma Co., 28.5mi NE Dolores, Schoolhouse Draw, 8000ft *+37.74/-108.16*, (VII), AMNH (9). – Montezuma Co., 25mi NE Dolores, Priest Gulch Spring, 7800ft *+37.58/-108.17*, (VII), AMNH (5). – Chaffee Co., 9mi W Buena Vista, Cottonwood Creek, 9600ft *+38.81/-106.27*, (VII), AMNH (1). – San Juan Co., 2-3mi S Silverton, 9,900-10,000ft *+37.76/-107.67*, (VIII), AMNH (6). – Huerfano Co., 15mi SSW La Veta, Cucharas Creek, 9400ft *+37.35/-105.10*, (VII), AMNH (2). – Huerfano Co., 8mi SSW La Veta, Cucharas River, 7800ft *+37.41/-105.06*, (VIII), AMNH (1). – Ouray Co., Box Canyon Falls, Ouray, 7800ft *+38.03/-107.66*, (VII), AMNH (13), coll. Bernhauer, FMNH (1). – ARIZONA: Yavapai Co., Camp Verde, Verde River *+42.28/-124.39*,

(IV), AMNH (1). – Graham Co., Pinaleno Mts., Grant Creek, 8500' *+32.68/-109.93*, (VII), CNCI (11), MHNG (1). – Graham Co., Pinaleno Mts., Post Creek, 9000' *+33.04/-110.36*, (VII), CNCI (11). – Chuska Mts., Apache Co., Wagonwheel Campground, 2250m *+36.05/-109.18*, (VII), CNCI (34), BMNH (30). – Chuska Mts., Apache National Forest, Apache Co., Escudilla Mt., 2840m, 9mi NE Alpine *+33.92/-109.11*, (VII), CNCI (8). – Cochise Co., Chiricahua Mtns., Rucker Canyon, (1730-)1760m *+31.75/-109.35*, (VII), CNCI (1), BMNH (1). – Greenlee Co., Hannagan Camp *+33.64/-109.33*, (VII), CNCI (1). – NEW MEXICO: Otero Co., Lincoln National Forest, 13mi S Cloudcroft, 7500' *+32.80/-105.74*, (VII), CNCI (142), MHNG (7). – Otero Co., Lincoln National Forest, 1mi SE Cloudcroft, 8750' *+32.94/-105.72*, (VII), CNCI (3). – Lincoln Co., Lincoln National Forest, Sierra Blanca Ski Area, 10600' *+33.40/-105.79*, (VII), CNCI (9), MHNG (1). – Lincoln Co., Sierra Blanca, 9500' *+33.37/-105.80*, (VII), CNCI (3). – Lincoln Co., S. Fork Bonito Creek, ca 7mi W Angus, 7500-8000' *+33.44/-105.76*, (VII), FMNH (2). – Sandia Mts., Bernalillo Co., Cibola National Forest, Las Huertas Creek, 7000' *+35.23/-106.41*, (VII), CNCI (18). – Sandia Mts., Bernalillo Co., Cibola National Forest, Las Huertas Creek, 6500' *+35.24/-106.41*, (VII), CNCI (4). – Sandia Mts., Bernalillo Co., Cibola National Forest, Tree Spring Trail, 8500' *+35.18/-106.42*, (VII), CNCI (9). – [El] Porvenir *+35.71/-105.41*, coll. Bernhauer, FMNH (1). – SOUTH DAKOTA: Lawrence Co., 13mi SSW Spearfish, Roughlock Falls, 5600ft *+44.35/-103.94*, (VII), AMNH (5). – Lawrence Co., 16mi SSW Spearfish, Little Spearfish Creek, 6000ft *+44.29/-104.00*, (VII), AMNH (42). – Lawrence Co., 5mi S of Spearfish, Bridal Veil Falls, 4700ft *+44.42/-103.87*, (VII), AMNH (1). – MISSOURI: Ripley Co., 5.5mi N Briar *+36.72/-90.97*, (V), AMNH (2). – INDIANA: 1mi NNW of Deputy, Foster's Caves *+38.81/-85.66*, (VI), AMNH (3). – KENTUCKY: Adair Co., 3mi WNW Columbia, Todd's Cave *+37.11/-85.37*, (VI), AMNH (1). – NEW YORK: Lake Placid *+44.28/-73.98*, (VII), CASC (1). – ALASKA: Fairbanks *+64.85/-147.72*, (VII), USNM (1). – Kenai Mts., Tern Lake Campground, 700' *+60.53/-149.54*, (VI), CNCI (2). – Kenai Pen., Anchor River, campground 12mi N Homer, 450' *+59.77/-151.50*, (VI), CNCI (2). – mi24 Wales Hwy., Hess Creek, 600' *+65.67/-149.17*, (VII), CNCI (1). – George Parks Hwy, mi220 *+63.83/-149.05*, (VII), CNCI (9). – Kenai Peninsula, 9mi N Seward *+60.23/-149.42*, (VII), AMNH (1). — CANADA: YUKON TERRITORY: Dempster Hwy., mi154, Ogilvie River, 1900' *+65.70/-138.07*, (VII), CNCI (3). – Dempster Hwy., mi100.5, Engineer Creek, 3000' *+65.36/-138.20*, (VII), CNCI (5), HNHM (2). – Dempster Hwy., mi139.5, 1900' *+65.58/-138.17*, (VII), CNCI (40), HNHM (1). – Dempster Hwy., mi45, 3500' *+64.48/-138.23*, (VII), CNCI (42). – British Mts., "Teal Lake", at edge of Firth R. (84-4C), 68°54'N, 140°23'W, 400m, (VI), CNCI (2). – BRITISH COLUMBIA: Ksan Historic Village near Hazelton, 55°14.95'N, 127°40.64'W, 218m (VII), CNCI (1). – Ymir *+49.29/-117.21*, (VI), CNCI (1). – Alaska Hwy., mi445, Peterson Creek *+59.00/-125.78*, (VII), CNCI (29). – Alta Lake, 2200' *+49.23/-125.65*, (VIII), CNCI (1). – 21mi W Creston *+49.10/-116.95*, (VI), CNCI (5). – 8mi W Creston *+49.10/-116.68*, (VI), CNCI (16). – 7mi E Terrace *+54.52/-128.41*, (VI), CNCI (2). – Slide Mt., 10mi E Barkerville 4500' *+52.67/-121.87*, (VI), CNCI (6). – Fernie, Lizard Creek *+49.47/-115.08*, (VII), CASC (1) [a misidentified paratype of *Ancyrophorus columbiensis*]. – Two Sisters Mt., 15mi E Barkerville, 4500' *+53.20/-121.53*, (VI), CNCI (12). – Manning Provincial Park, 20mi E Hope *+49.38/-120.87*, (VI), CNCI (21), HNHM (1). – Manning Provincial Park, 5km E west Park entrance *+49.24/-121.13*, (VI), CNCI (2). – Manning Provincial Park, Derek Falls 4000' *+49.07/-120.93*, (VII), CNCI (1). – Manning Provincial Park, Blackwell Peak, 6000-6750' *+49.18/-120.82*, (VI), CNCI (1). – Yoho N. P., valley of Hagen Peak *+51.58/-116.72*, (VIII), CNCI (3). – Yoho N. P., Amiskwi River, 6000' *+51.38/-116.55*, (VIII), CNCI (10). – Otterhead R., Yoho N. P., 5500' *+51.41/-116.69*, (VIII), CNCI (2). – Kootenay N. P., Sinclair Creek, 5000' *+50.64/-116.09*, (VI), CNCI (53). – Kootenay N. P., Kimpton Creek, 4000' *+50.65/-115.97*, (VII), CNCI (2). – Mt. Revelstoke N. P., 2000' *+51.05/-118.13*, (VIII), CNCI (1). – Glacier N. P., 10 mi E Rogers Pass *+51.30/-117.32*, (VI), CNCI (2). – 17km N Whistler (Hwy99), 600m (35a) *+50.28/-122.93*, (VII), MHNG (1). – ALBERTA: Jasper National Park, Miette Hot Springs, Sulphur Creek, 4500ft *+53.15/-117.78*, (VII), AMNH (4). – Jasper, Whistler Creek *+52.85/-118.09*, coll. Cameron, BMNH (5). – Spray Lakes *+50.90/-115.34*, (VII), coll. Cameron, BMNH (1). – L. Minnewanka *+51.28/-115.40*, (VII), coll. Cameron, BMNH (17). – Edmonton *+53.53/-113.50*, (IX), coll. J.W. Green, CASC (1). – Banff,

(Sundance) *+51.17/-115.62*, (VI), coll. Bernhauer, FMNH (2), coll. Cameron, BMNH (10). – 11mi SW Banff, Healy Creek *+51.10/-115.81*, (VIII), CNCI (17). – Banff N. P., Moraine Lake, 6200' *+51.32/-116.18*, (VI), CNCI (2). – Banff N. P., Cirrus Mt., 5500' *+52.17/-116.99*, (VI), CNCI (1). – Banff N. P., Boom Lake, 6000' *+51.27/-116.08*, (VII), CNCI (1). – Banff N. P., Mt. Temple, ski lodge, 6600' *+51.35/-116.22*, (VIII), CNCI (16). – 1mi E Kananaskis F. E. S., Lusk Creek, *+51.03/-115.03*, (VII and VIII), CNCI (22). – 1mi E Kananaskis F. E. S., 6000' *+51.03/-115.03*, (VII), CNCI (2). – Marmot Creek Basin, 10mi SW Kananaskis F. E. S., 6500' *+50.95/-115.13*, (VII), CNCI (1). – Waterton Lakes N. P., Rowe Creek, 5400ft *+49.06/-114.02*, (VIII), CNCI (22). – Waterton Lakes N. P., Rowe Creek, 5460ft *+49.06/-114.02*, (VIII), CNCI (12), BMNH (44). – Waterton Lakes N. P., Crypt Lake, 6500' *+49.00/-113.84*, (VI), CNCI (2). – Waterton Lakes N. P., mi3 Chief Mt. Hwy, 4500' *+49.09/-113.79*, (VI), CNCI (1). – Waterton Lakes N. P., Cameron Creek, 4900' *+49.04/-114.00*, (VI), CNCI (8). – Waterton Lakes N. P., Cameron Creek, 5200' *+49.03/-114.01*, (VI), CNCI (9). – Waterton Lakes N. P., Rowe Lakes Track, 6300-6400' *+49.05/-114.05*, (VI), CNCI (9). – Waterton Lakes N. P., Lower Bertha Falls, 4800' *+49.04/-113.90*, (VI), CNCI (5). – Waterton Lakes N. P., Rowe Creek Track, 5300' *+49.06/-113.99*, (VIII), CNCI (3). – ONTARIO: South March nr. Ottawa (256) *+45.38/-75.90*, (V), MHNG (1 ♂, 2). – NEW BRUNSWICK: Northumberland Co., N.W. Miramichi River *+46.95/-65.75*, (VII), CNCI (1 ♂).

Ochtheophilus lenkoranus (Scheerpeltz, 1950)

NON-TYPE MATERIAL EXAMINED: **SWITZERLAND**: Kt. Vaud, les Avants *+46.45/+06.94*, (VII), MHNG (1). — **ITALY**: Crognaleto (TE), Zingano *+42.59/+13.49*, (VIII), coll. Zanetti (1). – Cortino (TE), Padula *+42.62/+13.47*, (X), coll. Zanetti (1). – Sicilia, NW Francavilla, 37°56'N, 15°06'E, 480m, (V), coll. Assing (1). — **SLOVAKIA**: Pieniny, Dunajec river *+49.39/+20.41*, coll. Roubal, SNMC (1). – Nová Sedlica, Zbojský stream 450m *+49.04/+22.48*, (VI), SMBC (1 ♂), HNHN (1 ♂). – Malá Fatra, Vratna dolina, Vrátnanka *+49.25/+19.04*, (VIII), ZMHB (1). – Bukovské vrchy, bank of Zbojský stream, 450m *+49.04/+22.47*, (VI), SMBC (1 ♂, 4), HNHN (2 ♂, 1 ♀, 1). – Bukovské vrchy, Ruské, bank of stream, 500m *+49.04/+22.41*, (VII), SMBC (2 ♂), HNHN (1 ♂, 1 ♀). – Bardejov, Rhodyhes 3 dvor *+49.29/+21.28*, (V), SMBC (1). — **ROMANIA**: jud. Caraș-Severin, Munții Semenice, Cheile Minișului, 4km SE Anina, p. Miniș, gravel islands (341), 45°01' 48"N, 21°51' 41"E, 620m, (X), HNHN (1). — **BOSNIA-HERZEGOVINA**: Hercegovina, Gacko *+43.17/+18.53*, (VIII), coll. Lohse, MHNG (4). – [Hercegovina, Prenj planina] Igbar [Idbar] Thal [Grabovicaschlucht] *+43.64/+17.88*, coll.? Zoufal, PMSL (1 ♂). – Bosnia, Zvijezda Planina *+44.18/+18.41*, (VII), coll. Fodor, HNHN (1). – Bosnia, Prozor *+43.82/+17.61*, coll. Leonhard, NHMW (5). — **BULGARIA**: Melnik *+41.52/+23.40*, (V), SMNS (1). — **ALBANIA**: Nord-Albanien, Pukë - Fushë i Arrësit *+42.05/+19.90*, (V), coll. Smetana, CNCI (3). – Nord-Albanien, Fushë i Arrësit *+42.06/+20.02*, (V), coll. Smetana, CNCI (1). – Alban. mer., Terbaci [Tërbaçi] *+40.25/+19.65*, (V), MHNG (3). — **GREECE**: Vikos gorge *+39.96/+20.70*, (V), coll. Mahler (3). – Fokis, 25km SW Lamia, Stromi, riverbank (13), 38°41'24"N, 22°12'54"E, 640m, (IV), coll. Wunderle (1). – Epirus, Nomós Ioánnina, Tímfi Gebirge, bei Papingó, 900m, Laubwald *+39.97/+20.68*, (V), SMNS (3). — **TURKEY**: Antalya, Güneycik, bank of Karpuz river, 600m *+36.75/+31.77*, (I), coll. Assing (2). – Antalya, Yaylaalan, 900m *+36.95/+31.48*, (XII), coll. Assing (7), HNHN (3). – Antalya, umg. Manavgat, 900m [Yaylaalan] *+36.93/+31.47*, (XII), coll. Assing (6). – umg. Manavgat, Yaylaalan, 850m *+36.95/+31.48*, (XII), coll. Wunderle (2). – Antalya, Köprülü-Kanyon, nahe Beskonak, Ufer des Köprü Çayı, 126m (008) *+37.11/+31.19*, (III), coll. Rose (1). – Antalya, 5km NW Kemer, felsiges Flussufer in Schluchttal (030a), 36°36'03.0"N, 30°29'03.6"E, 197m, (III), HNHN (1). – Antalya, Köprülü-Kanyon, 1030m N Beskonak (050a), 37°13'10.9"N, 31°12'45.1"E, 265m, (III), coll. Rose (26), SEMC (8), Antalya, Köprülü-Kanyon, 1km N Beskonak (051), 37°11'14.4"N, 31°10'47.3"E, 178m, (III), coll. Rose (13), SEMC (3). – Güneycik, near Gündogmus, 700m *+36.80/+32.02*, (I), coll. Wunderle (1). – Kastamonu prov., E Inebolu (9) *+41.97/+33.77* (V), NHMW (1 ♂). – Sinop prov., W Yenikonak (11) *+41.87/+34.61* (V), NHMW (1 ♀). – Artvin prov., W Borçka (45) *+41.36/+41.67* (VI), NHMW (1 ♂). – Erzincan prov., SE Refahiye (77) *+39.89/+38.77* (VI), NHMW (1 ♂). — **GEORGIA**: Zchneti [Tsqneti] pr. Tbilisi, 800m *+41.71/+44.70*, (VI), coll. Schülke (2 ♂),

HNHM (1 ♀). — **AZERBAIJAN:** Lenkoran *+38.78/+48.60*, coll. Reitter, HNHM (2). — N Куткашена, бер. р. Гамзаличай, 1100-1200м *+41.03/+47.85*, (VII), coll. Solodovnikov, ZMUC (1). — **RUSSIA:** Крым [= Крымская область], Бахчисарайский район, Счастливое, *+44.57/+34.07*, (V), coll. Gusarov, ZMUN (1). — Crimea, Crimean Game Preserve, upper part of Katcha [Каца] river, bank, 800m [44°43'31"N, 33°32'55"E], coll. Schülke (2).

Ochtheophilus omalinus (Erichson, 1840)

NON-TYPE MATERIAL EXAMINED: **MOROCCO:** Esmir [Ismir] *+30.92/-08.88*, coll. Fauvel, ISNB (1). — **GREAT BRITAIN:** CH, Etherow Vly (SJ99) *+53.42/-02.04*, (VII), MMUE (4). — MY, Queen Mary's Dub (SE37) *+54.12/-01.49*, (IX), MMUE (1). — ML, Gressingham (SD56) *+54.12/-02.65*, (IV), MMUE (1). — DY, Snelston (SK14) *+52.99/-01.79*, (VII), MMUE (5). — RA, Glasbury (SO14) *+52.04/-03.20*, (VI), MMUE (3). — CH, Rostherne (SJ78) *+53.35/-02.38*, coll. Donisthorpe, BMNH (1). — EI, Nethy Bridge (NJ02) *+57.27/-03.65*, (VII, IX), coll. Donisthorpe and coll. Sharp, BMNH (2). — MY, East Keswick (SE34) *+54.60/-03.15*, (VII), coll. Steel, BMNH (3). — DF, Dumfries (NX97) *+55.09/-03.51*, coll. G. C. Champion, BMNH (1). — Paisley (NS46) *+55.83/-04.42*, coll. Power, BMNH (4). — Sawley (SD74) *+53.88/-02.35*, (VIII), coll. Power, BMNH (1). — HF, Llancillo (SO32) *+51.95/-02.80*, (VI), BMNH (1). — **IRELAND:** Co. Wicklow, Bray (021) *+53.22/-06.09*, (IX), coll. G. C. Champion, BMNH (1). — **SPAIN:** Pais Vasco, Hernani, Rio Urumea (Es501b), 43°15.90'N, 1°58.15'W, (VI), coll. Vorst (3). — Pais Vasco, Hernani, Pergoaga, Rio Urumea (Es502f) 43°13.43'N, 1°55.53'W, (VI), coll. Vorst (1). — **FRANCE:** dept. Haute-Marne, Saint-Dizier *+48.64/+04.95*, coll. Mequignon, MHNG (2). — Gallia mer., Montpellier *+43.61/+03.88*, (IV), coll. Renner (1). — Carcassonne *+43.22/+02.35*, coll. Mancini, MCSN (2), ISNB (1). — Hyères *+43.12/+06.12*, coll. Fauvel, ISNB (1). — Hérault, St. Guilhem *+43.73/+03.55*, ISNB (2). — Maubourguet *+43.46/+00.03*, ISNB (11). — Avignon, Rhône (l'inond-ns) *+43.95/+04.81*, (III), coll. K. Daniel, ZSMC (2), к. А. Яковлева, ZISP (2). — **LUXEMBOURG:** Diekirch Drauffelt, Clief (Lx8), 50°00.71'N, 6°00.37'E, (VI), coll. Vorst (1). — **HOLLAND:** Limburg, Vlodrop, Roer (V3115I), 51°07.70'N, 6°05.00'E, (VI), coll. Vorst (2). — **GERMANY:** Altenahr / Eifel, Ahrtal LA 6797 *+50.52/+06.98*, (VII), coll. Renner (1). — Kirm / Nahetal, Monzingen *+49.78/+07.45*, (V), coll. Renner (2), Höxter / Weser, Godelheim, Ottbergen *+51.77/+09.37*, (VI), coll. Renner (1). — Eisenach *+50.98/+10.32*, (V), NKME (2). — Rheinland, Altenahr, Langfigtal *+50.52/+07.00*, (IV and VI), coll. Wunderle (17). — Dresden *+51.05/+13.75*, ZSMC (1). — München *+48.15/+11.58*, (VI and IX), ZMHB (3). — Grünwald, München, Isartal *+48.06/+11.52*, (VI and IX), ZSMC (2). — Gr. Hesseloh (München), Isar *+48.09/+11.53*, (V), ZSMC (4). — Garching bei München, Isar *+48.25/+11.65*, (IV and VII), ZSMC (6). — Wolfratshausen (Oberbayern), Isar, Loriach(?) *+47.92/+11.42*, (V), ZSMC (10). — Bavaria, Iller b. Buxheim, NW Memmingen *+48.00/+10.13*, (VII), SMNS (1). — Garmisch *+47.50/+11.10*, (X), ZMHB (1). — Eschenlohe, Murnau, O. B. *+47.83/+11.20*, (VIII), ZMHB (1). — Walkenried, Harz (Mts.) *+51.58/+10.61*, (VI), ZMHB (2). — Bayern, Loisach-ufer *+47.93/+11.45*, (VI), ZMHB (2). — Brandenburg, LKr. Spree-Neisse, Pusack, Neisseufer *+51.59/+14.73*, (V), coll. Schülke (1). — Sachsen, Wechselburg, Mulde-ufer *+51.00/+12.77*, (VIII), ZMHB (19). — Frohburg, Wald, Stöckigt *+51.05/+12.55*, (IV), SDEI (1). — Cassel *+51.32/+09.50*, coll. Kraatz, SDEI (1), coll. Bosch, SMFD (1). — Westphalia, Eichhoff *+50.83/+09.68*, coll. Schneider-Kelch, SDEI (1). — Wechselburg/Sa. *+51.00/+12.77*, (VIII), SEMC (1). — Darnstadt *+49.85/+08.65*, coll. Neumann, SMFD (1). — Buchfart *+50.90/+11.35*, (VII), coll. Bosch, SMFD (1). — Bad Wimpfen *+49.23/+09.13*, coll. Neumann, SMFD (1). — Sachsen, LKr. Delitzsch, Mulde zwischen Gruna & Laussig *+51.53/+12.63*, (V), coll. Schülke (3). — Sachsen, Kr. Freiberg, Hohenfichte (Leubsdorf), bank of Flöha, 320m *+50.82/+13.14*, (IV), coll. Gollkowski (9). — Sachsen, Kr. Freiberg, 1km NE Braunsdorf (Niederwiesa), bank of Zschopau, 260m *+50.89/+13.02*, (IV), coll. Gollkowski (8). — Krs. Flöha, Lichtenwalde, Zschopau-ufer *+50.88/+13.01*, (IV), coll. Schülke (1). — umg. Braunsdorf, Bezirk Karl-Marx-Stadt *+50.74/+11.92*, (V), coll. Schülke (2). — **SWITZERLAND:** Kt. Basel, Aesch *+47.47/+07.60*, (IV-V), coll. Toumayeff, MHNG (5). — Kt. Bern, Aarberg *+47.04/+07.27*, (IV), coll. Toumayeff, MHNG (1). — Kt. Genève, Vernier *+46.21/+06.09*, (VI), MHNG (1). — Kt. Genève, Pont de Sierne, crue de l'Arve [bridge on stream Arve] *+46.18/+06.18*, (II), MHNG

(1). – Kt. Fribourg, Oberflamatt *46.89/+07.32*, (V), coll. Toumayeff, MHNG (1). – Kt. St. Gallen, Sittersteg (PPL) *+47.42/+09.34*, (VI), coll. Toumayeff, MHNG (1). – Kt. Thurgau, Bischofszell, bord de la Thur *47.50/+09.23*, (VI), MHNG (1). – Kt. Vaud, Lausanne, Parc du Bourget *46.52/+06.59*, (V and VI), coll. Toumayeff, MHNG (2). – Kt. Genève, Certoux [l'Aire] *+46.16/+06.09*, (III), coll. Toumayeff, MHNG (8). – Kt. Genève, Chancy, La Laire Rau, 350m, 46°08'30"N, 5°58'38"E, (V), (HNHM (2). Kt. Genève, Chancy, la Laire (river) *+46.15/+05.97*, (II, IV, VI), in part coll. Rehous, MHNG (9), coll. Toumayeff, MHNG (1). – Kt. Genève, la London (river) *+46.17/+06.02*, (IV), MHNG (1). – Kt. Vaud, Aubonne, la Vaux *46.50/+06.39*, (V), coll. Toumayeff, MHNG (1). – Kt. Fribourg, Hauterive *47.01/+06.96*, MHNG (1). – Kt. Bern, Stockhorn (Mt.) *+46.69/+07.54*, (V), MHNG (1). — **ITALY:** Cervignano, Inund. Isonzo *+45.82/+13.33*, coll. Rambousek, NMPC (1). – Grado *+45.68/+13.38*, (VII), coll. Bernhauer, FMNH (1). – Poggio Cavallo, dint. di Grosseto *+42.77/+11.17*, coll. Baliani, MSNV (1). – Piemonte-Torino, Stura river *+45.12/+07.72*, (III), MSNV (5). – Piacenza, Po *+45.04/+09.67*, (IV), coll. Scheerpeltz, NHMW (1). – Ameglia, Liguria or. *+44.07/+09.95*, (V), coll. Binaghi, MCSN (1). – Terranova Pausania *+40.92/+09.52*, (V), coll. Binaghi, MCSN (4). – Pieris *+45.82/+13.45*, (IX), coll. Mancini, MCSN (1). – Friuli - Ven. Giul., Tagliamento-ufer, S bridge near Codroipo (3), 45°56'50"N, 12°54'49"E, (IX), coll. Schülke (1). – riuli - Ven. Giul., Isonzo-ufer, SE Villesse (7), 45°51'11"N, 13°27'04"E, 10m, (IX), coll. Schülke (2). – Sardinia, Oristano *+39.90/+08.60*, (V), ZMHB (4). – Sardinia, Assuni [Asuni] *+39.87/+08.95*, coll. Bernhauer, FMNH (2), coll. Lokay, NMPC (1). — **CZECH REPUBLIC:** Carlsbad [Karlovy Vary] *50.23/+12.87*, NMPC (1). – Otadovice *+49.84/+18.29*, (IV), coll. Rambousek, NMPC (1). – Moravia, Ostrava *+50.22/+14.75*, coll. Rambousek, NMPC (2). – Těchonín *+50.07/+16.63*, (VII), NMPC (1). – J. Beran, Plzeň *+49.76/+13.87*, (VI), coll. Roubal, SNMC (1). – Paskau [Paskov] *+49.74/+18.29*, coll. Stenius, MZHF (1). – Toušeň *+50.11/+14.72*, coll. Lokay, NMPC (1). – Praha-Poděbrady road 50km car net-trap *+50.17/+15.00*, (V), coll. Smetana, CNCI (1). – Čestice (Boh. bor. or.) *+50.13/+16.15*, (V), coll. Smetana, CNCI (3). – Boh. or., Hradec Králové env. *+50.21/+15.84* (VIII), coll. Steel, BMNH (1). – Bohemia, Běleč nad Orlicí *+50.20/+15.95*, (V-VI), coll. Smetana, CNCI (17). – Boh. bor. or., Opatovice nad Labem *+50.15/+15.80*, (VI), coll. Smetana, CNCI (8). – Moravia bor. Vyšší Lhoty - Morávka *+49.63/+18.45*, (V), coll. Janák (9). – Bohemia, Brandeis a/Elbe [Brandýsek] *+50.18/+14.18*, (III-IV-V), coll. Skalitzky, NHMW (4), coll. Scheerpeltz, NHMW (1), ZISP (1), coll. Lokay, NMPC (2). – Prague *+50.10/+14.45*, coll. Neumann, SMFD (3), PMSL (2). – Silesia, Frýdek *+49.92/+19.08*, (V), coll. Smetana, CNCI (1). — **POLAND:** Silesia, Teschen [Cieszyn] *+49.77/+18.60*, ZSMC (3), coll. Stenius and coll. Lindberg, MZHF (2), in part coll. Scheerpeltz, NHMW (2), in part coll. Ulbrich, SMNS (5), coll. Bosch and coll. C. Stock, SMFD (11), coll. Liebmann and coll. Künnemann, SDEI (5), ZMHB (2), FMNH (8), MSNV (1), NMPC (13). – Katzbach Gebirge [Góry Kaczawskie] *+50.95/+15.93*, (IV-X), coll. Kolbe, UWCP (43). – Brechelshof [Małuszów] *+51.09/+16.14*, (V), coll. Kolbe, UWCP (3). – Goldberg [Złotoryja] *+51.13/+15.92*, coll. Kolbe, UWCP (4). – Lähn [Wleń] *+51.02/+15.68*, coll. Kolbe, UWCP (2). – Reinerz [Duszyniki-Zdrój] *+50.40/+16.37*, (V), coll. Polentz, UWCP (8), ZSMC (1). – Schlesien, Liegnitz *51.20/+16.17*, coll. Scheerpeltz, NHMW (2). — **SLOVAKIA:** Banská Bystrica *+48.74/+19.15*, (IV), coll. Roubal, SNMC (3), coll. Kouřil, NMPC (1). – Humenné *+48.93/+21.91*, (II), coll. Smetana, CNCI (1). – Kováčovce, Ipel' *+48.10/+19.47*, (V), coll. Roubal, SNMC (1). – Trenčianska Teplá, valley of Váh *+48.93/+18.12*, (V), coll. Roubal, SNMC (4), coll. Kouřil, NMPC (2). – Trenčín, Istebník *48.91/+18.03*, (VI), coll. Rambousek, NMPC (1), coll. Lokay, NMPC (3). – Pieniny, bank of Dunajec, under Pol'ana *+49.41/+20.45*, (IV), SMBC (2). – Poliakovce, gravel bank of Topľa *+49.25/+21.42*, (IX), SMBC (1). – Komarov, gravel bank of Topľa *+49.27/+21.27*, (VI), SMBC (1). – Marhaň, gravel bank of Topľa *+49.18/+21.46*, (VI), SMBC (10). – Bukovské vrchy, bank of Zbojský stream, štrk, 560m *+49.08/+22.46*, (VI), SMBC (1). – Slovakia, Vihorlat, Remetské Hamry *+48.85/+22.18*, (VII), coll. Smetana, CNCI (1). — **CROATIA:** Agram [Zagreb] *+45.82/+15.98*, coll. Kouřil, NMPC (1). — **AUSTRIA:** Vorarlberg (11028), Dornbirn, NSG Schwarzes Zeug Birken, 410m *+47.44/+09.72*, (V), MMUE (2). – Wien *+48.20/+16.37*, coll. Kouřil, NMPC (1). – Kärnten, Karawanken, St. Margarethen *+46.60/+14.84*, (VII), coll. Wunderle (1). – Nord-Tirol, umg. Reutte *+47.48/+10.72*, (V),

ZSMC (4). – Bav., Au. Pupplinger $+47.92/+11.42^*$, (VI), ZSMC (10). – Vorarlberg, Hohenweiler, Rickenbach, schotterbank, 480m $+47.56/+09.76^*$, (V), coll. Kapp (1). – Niederösterreich, Schönbüchel [au der Donau] $+48.26/+15.37^*$, (VIII), coll. Bierig, FMNH (4). – Ob. Donau, Bad Hall, Salzbach $+48.03/+14.20^*$, (VI), coll. Bernhauer, FMNH (3). – Niederösterreich, Herzogenburg $+48.29/+15.70^*$, coll. Grundmann, NHMW (5). – Niederösterreich, Steinegg $+48.63/+15.57^*$, (IV), coll. Bernhauer, FMNH (10). – Lang-Enzersdorf (b. Donau) $+48.30/+16.35^*$, (VI), coll. Bernhauer, FMNH (5), coll. Luze, NHMW (3). – Mayr zu Derndorf $+48.17/+14.17^*$, (IV), NHMW (2). – Grünburg (O. Oe.), Sand $+46.78/+14.38^*$, (IV), NHMW (3), coll. Bernhauer, FMNH (2). – Kleinreifling $+47.82/+14.63^*$, (VII), coll. Bernhauer, FMNH (2), NHMW (1). – Wachau $+48.33/+15.42^*$, NHMW (3). – Gars am Kamp $+48.58/+15.65^*$, (III-IV), NHMW (6), coll. Bernhauer, FMNH (1). – Gesäuse Alp $+47.58/+14.62^*$, (VI), coll. Pinker, NHMW (1). – Kampthal, Schönberg am Kamp $+48.52/+15.68^*$, NHMW (1). – Kampthal $+48.55/+15.65^*$, PMSL (3), coll. Bernhauer, FMNH (2). – Korneuburg $+48.35/+16.33^*$, ISNB (4). – Ybbsitz, Prolingbach $+47.93/+14.88^*$, (IX), coll. Pinker, NHMW (1). – Waidhofen a. Ybbs $+47.95/+14.80^*$, coll. Rebmann, SMFD (2), in part coll. Moosbrugger, NHMW (11), coll. Bernhauer, FMNH (28). – Golling $+47.60/+13.20^*$, (VI), coll. Settler, SMFD (1). — **HUNGARY:** Magyar-lak, Rába, 200m $+46.95/+16.35^*$, (IX), HNHM (1). – Rábagyarmat, Rába, 250m $+46.95/+16.42^*$, (IX), HNHM (2). – Abaújvár, Bika-rét, 300m $+48.53/+21.31^*$, (IV), HNHM (2). – Gergelyugonya, bank of river Tisza $+48.13/+22.35^*$ (IV), HNHM (12). – Komárom-Esztergom m., Pilismarót, Pilismaróti-patak $+47.78/+18.87^*$, (VI), HNHM (2). — **UKRAINE:** Užhorod $+48.62/+22.31^*$, in part coll. Kouřil, NMPC (4). – Polon., Wolhyn., Koweł $+51.21/+24.70^*$, coll. Rambousek, NMPC (4). — **ROMANIA:** jud. Covasna, 2km SSW Bixad, shadowed bank of Jombor and confluence point with Olt (23) $46^{\circ}04'39''\text{N}$, $25^{\circ}50'09''\text{E}$, 910m, (V), HNHM (12). – jud. Maramureș, Petrova, sandy spot with plant debris on bank of river Vișeu nr. bridge to Crasna (36) $47^{\circ}49'41''\text{N}$, $24^{\circ}13'38''\text{E}$, 380m, (V), HNHM (1). – jud. Maramureș, Munții Ignișului, 2.5km SW Piatra, stream Sugătag (38), $47^{\circ}58'49''\text{N}$, $23^{\circ}31'16''\text{E}$, 380m, (VI), 11.VI.2003, HNHM (1). – jud. Maramureș, 1km N Piatra, bank of river Tisa (39), $48^{\circ}00'11''\text{N}$, $23^{\circ}33'53''\text{E}$, 220m, (VI), HNHM (10), MGAB (1). – jud. Maramureș, Vișeu de Sus, gravelbank of stream Vaser, 4km ENE from confluence with Vișeu (43) $47^{\circ}43'19''\text{N}$, $24^{\circ}27'54''\text{E}$, 500m, (VI), HNHM (1). – jud. Alba, Munții Trascău, Cheile Vălișoarei, 2km SE Vălișoara, deep gorge (112), $46^{\circ}22'49''\text{N}$, $23^{\circ}34'52''\text{E}$, 410m, (VI), HNHM (8), MGAB (2). – jud. Harghita, Munții Hășmaș, Cheile Bicazului, 1km E Pt. Altarului, 3km ESE Bicaz-Chei (122), $46^{\circ}48'45''\text{N}$, $25^{\circ}49'25''\text{E}$, 900m, (VI), HNHM (1). – jud. Mureș, 3.8km W Răstolița, small island on N bank of river Mureș (156), $46^{\circ}58'20''\text{N}$, $24^{\circ}56'48''\text{E}$, 500m, (IX), HNHM (2), MGAB (65). – jud. Harghita, 1.5km NW Sâncrăieni, (Poklandfalva), N bank of river Olt (165), $46^{\circ}18'39''\text{N}$, $25^{\circ}49'59''\text{E}$, 660m, (IX), HNHM (3). – jud. Mehedinți, Valea Cernei, 1km SE Scărișoara, bank opposite big cliff above water (174), $45^{\circ}01'15''\text{N}$, $22^{\circ}33'25''\text{E}$, 370m, (IV), HNHM (5), MGAB (16). – jud. Alba, Munții Bihor, Girda (de Sus), confluence of p. Dizditu and Arieșu Mare (222), $46^{\circ}27'25''\text{N}$, $22^{\circ}51'02''\text{E}$, 720m, (VI), HNHM (1). – jud. Bistrița-Năsăud, Ilva Mică, confluence of Someșul Mare and Ilva, gravel island (288), $47^{\circ}18'56''\text{N}$, $24^{\circ}39'04''\text{E}$, 410m, (V), HNHM (4), MGAB (6). – jud. Maramureș, Valea Vișului, Vișeu, 1.5km S Tisa confluence, W bank, sandy shoal N hanging bridge (305a), $47^{\circ}54'04''\text{N}$, $24^{\circ}09'33''\text{E}$, 360m, (VI), HNHM (5). – jud. Maramureș, 1km NW Vima Mică, streamlet NE of Sălnița, before entering Lăpuș from S (394), $47^{\circ}55'01''\text{N}$, $23^{\circ}56'41''\text{E}$, 300m, (VI), HNHM (1). – jud. Maramureș, 1.5 km NW Vima Mică, big unforested bend of Lăpuș S of Dealu Corbului (395), $47^{\circ}55'01''\text{N}$, $23^{\circ}56'41''\text{E}$, 300m, (VI), HNHM (6), MGAB (24). – jud. Maramureș, Sighetu Marmației, Dobăieș (Dobolyos), $47^{\circ}55'07.1''\text{N}$, $23^{\circ}56'43.5''\text{E}$, 400m, (VI), HNHM (3). – jud. Maramureș, Săpânta, Piatra, Mireș (Nyires), $47^{\circ}54.140''\text{N}$, $23^{\circ}44.146''\text{E}$, 500(?)m, (VI), HNHM (1). — **BOSNIA-HERZEGOVINA:** Bosnia, near Sarajevo, Mujaković, 500m $+43.97/+17.82^*$, (V), coll. Wunderle (1). – Bosnia, near Sarajevo, Gromiljak $+43.97/+18.05^*$, (V), coll. Wunderle (3). – Sarajevo $+43.86/+18.44^*$, HNHM (13). – Ilidza [Ilidže] bei Sarajevo $+43.83/+18.31^*$, (II, V and XII), ZSMC (1), coll. Fodor, HNHM (8). – Sarajevo, Quelle Boscha [source of river Bosna] $+43.82/+18.29^*$, (V), coll. Assing (1). – Bosnia, Željeznica, Rijeka $+44.14/+18.13^*$, (XI), coll. Fodor, HNHM (2). – Bosnien, Prozor $+43.82/+17.61^*$, coll. Leonhard, NHMW (1). — **NORWAY:** Sør-Trøndelag [county], Melhus, Melhus, river Gaula $+63.18/+10.30^*$, (V), ZMUN, 1. – Finnmark, Sor-

Varanger *+69.73/+30.13*, coll. Roubal, SNMC (1), coll. Rambousek, NMPC (1). – Norv. b., Skibotn *+69.40/+20.27*, (VII), coll. Lindberg, MZHF (1). – Framnes, M. elv. *+68.43/+17.38*, (VI, VIII and IX), coll. Palm, MZLU (2), NHMW (6). – Troms, Målselva *+69.23/+18.50*, (VI), MZLU (1). – Jakobselv *+69.75/+30.80*, exp. Münster, ZMUN (1). – Alten *+69.95/+23.20*, (VI), exp. Münster, ZMUN (4). – Bossekop, Alten *+69.95/+23.20*, (VI), exp. Münster, ZMUN (1). – Saltdal *+67.15/+15.50*, (VI), ZMUN (1). — **SWEDEN:** Maråker *+61.20/+17.15*, ZMUN (2). — **RUSSIA:** Lapponia rossica, Petsamo [Pechenga] *+69.55/+31.20*, (VII), coll. Lindberg, MZHF (2), coll. Paganetti, NHMB (1). – Lapponia rossica, Trifona *+69.65/+31.38*, MZHF (1). – Lapponia rossica, Yläluostari *+69.43/+31.00*, MZHF (1). – Романовка, близ Ямбурга *+59.37/+28.60*, (VII), ZISP (1). – Красноярск[ий] кр[ай] р[ека] Елогуй №99 Рывкин «Красноярский край, Туруханский район, Елогуйский заказник, р.Елогуй, бкм ниже устья р. Тына. Под сеном на тропинке близ кордона.» = Krasnoyarsk Territory, Turukhanskiy District, Yeloguyskiy Refuge, Yeloguy River, 6 km below mouth of Tyna River, 70m *+61.95/+86.04*, (VIII), coll. Semenov via M. Gildenkov (1). – Оренбургская губерния, Иргизла, берег реки Бьлой [Белой], *+52.95/+57.03*, (VI), ZISP (5). – Twer *+56.83/+35.93*, (VII), coll. Roubal, SNMC (3), NMPC (3), coll. Mequignon, MHNG (3). – Починки, Серпуховский уезд *+54.96/+37.80*, ZMUN (1). – Московская губерния, река Ока, окрестности Серпухова *+54.91/+37.42*, (IV?), ZMUN (1). – Schwarzes Meer, Sotschi *+43.62/+39.74*, (VII), ZMHB (1). — **GREECE:** Hypati *+38.87/+22.23*, (IV), coll. Roubal, SNMC (1). — **BULGARIA:** Veleka (river), 2km below Katschul *+42.02/+27.67*, (VI), coll. Assing (2). – Primorsko *+42.27/+27.76*, (VII), coll. Mantič (1). — **TURKEY:** Turkey: Kuzdere Köprü (T13w), 36.601°N, 30.481°E, 154m, (III), coll. Vorst (2). – Muğla, NW Fethiye, Kargi, gravel river bank (22), 36°43'21"N, 29°03'08"E, 25m, (III), coll. Assing (1). – Antalya, Güneycik, bank of Karpuz river, 600m *+36.75/+31.77*, (I), coll. Assing (16). – Antalya, umg. Manavgat, 0-50m (16) *+36.78/+31.43*, (I), coll. Assing (1). – Antalya, umg. Manavgat, 600m (20) *+36.77/+31.78*, (I), coll. Assing (3). – Güneycak, near Gündogmus, 700m *+36.80/+32.02*, (I), coll. Wunderle (3). – Antalya, Köprülü-Kanyon, nahe Beskonak, Ufer des Köprü Çayı, 126m (008) *+37.11/+31.19*, (III), coll. Rose (3). – Antalya, Köprülü-Kanyon, N Sagırın (007), 37°04'33.8"N, 31°13'55.5"E, 30m, (III), coll. Rose (1). – Antalya, Köprülü-Kanyon, 10km N Beskonak (050a), 37°13'10.9"N, 31°12'45.1"E, 265m, (III), coll. Rose (1). – Antalya, 5km NW Kemer, felsiges Flussufer in Schluchttal (030a), 36°36'03.0"N, 30°29'03.6"E, 197m, (III), coll. Rose (4). – SSW Antalya, Ciralı, streambank *+36.42/+30.47*, (IV), coll. Wunderle (9).

Ochtheophilus planus (LeConte, 1861)

NON-TYPE MATERIAL EXAMINED: **USA:** WASHINGTON: Skagit Co., 20mi W Mazama, Rainy Pass, 4900' *+48.59/-120.95*, (VIII), CNCI (1). – WYOMING: Medicine Bow National Forest, Libby Creek *+41.50/-106.30*, (VII), FMNH (1). – CALIFORNIA: Trinity Co., 12mi W Coffee Creek, Shasta National Forest, 3400' *+41.14/-123.16*, (VII), CNCI (1). – COLORADO: San Juan Co., 2-3mi S Silverton, 9,900-10,000ft *+37.76/-107.67*, (VIII), AMNH (2). – NEW YORK: Catskills, Slide Mt. *+41.99/-74.38*, (VI), USNM (5). – VERMONT: Smugglers' Notch *+44.57/-72.78*, (VIII), CASC (12). – NEW HAMPSHIRE: Glen [Ellis] Falls, near Gorham *+44.24/-71.25*, (VIII), BMNH (1). – Coos Co., 1.0mi S Jefferson Notch, 2700' *+44.28/-71.35*, (IX), FMNH (1). – Coos Co., 0.6mi S Jefferson Notch, Jefferson Brook, 880m *+44.29/-71.35*, (V), FMNH (2). – White Mountains, Mt. Washington, Monroe Brook, 3000' *+44.25/-71.32*, (VI), CNCI (4). – White Mountains, Mt. Washington *+44.27/-71.30*, in part coll. Blanchard, coll. F.A. Eddy and coll. Bowditch, MCZN (33), in part coll. Schaufuss, ZMHB (7), CASC (1). – White Mountains, Mt. Washington, Near Half Way House *+44.30/-71.27*, (VII), coll. Hayward, MCZN (6). – White Mountains, Mt. Washington, Near Lake of Clouds *+44.25/-71.32*, (VII), coll. C. A. Frost, MCZN (2). – MAINE: Piscataquis Co., Mt. Katahdin, 1500' *+45.89/-68.98*, (VII), CNCI (1). – ALASKA: Kuskokwi m. R., Bethel, 61°47'N, 161°45'W, (VI), coll. Zanetti (1). – George Parks Hwy, mi220 *+63.83/-149.05*, (VII), CNCI (65). – 12mi N mi78 Denali Hwy, Windy Creek *+63.12/-147.35*, (VII), CNCI (11). – mi94 Denali Hwy, Canyon Creek *+63.20/-147.80*, (VII), CNCI (10). – Dragonfly Creek, George Parks Hwy, mi243 *+64.08/-149.10*, (VI), CNCI (4). – Kenai Pen., Kasilof River at Hwy.1 *+60.34/-151.27*, (VI), CNCI (1). – Kenai Pen., Clam Gulch *+60.23/-151.39*, (VI),

CNCI (3). – Kenai Pen., Moose Pass *+60.49/-149.37*, (VI), CNCI (1). – Kenai Mts., 22mi N Seward, 600-800' *+60.41/-149.36*, (V), CNCI (5). – Kenai Mts., 23mi N Seward, 600-900' *+60.42/-149.36*, (V), CNCI (4). – Kenai Mts., creek above Tern Lake Campground, 850-900' *+60.51/-149.54*, (VI), CNCI (2). – mi110 Denali Hwy, Seattle Creek *+63.35/-148.28*, (VII), CNCI (1). – Kenai Pen., Anchor River, campground 12mi N Homer, 450' *+59.77/-151.50*, (VI), CNCI (5). – mi24 Wales Hwy., Hess Creek, 600' *+65.67/-149.17*, (VII), CNCI (5). – Kenai Mts., Tern Lake Campground, 700' *+60.53/-149.54*, (VI), CNCI (14). – Kenai Mts., Quartz Creek at Hwy 1, 500' *+60.48/-149.72*, (VI), CNCI (1). – Prudhoe Bay Rd., 6mi S Galbraith Lake, 2400' *+68.39/-129.42*, (VII), CNCI (54). – Prudhoe Bay Rd., 6mi S Galbraith Lake, 2800' *+68.40/-129.42*, (VII), CNCI (58). – Prudhoe Bay Rd., 15mi S Galbraith Lake, 3000' *+68.27/-129.43*, (VII), CNCI (43). – Prudhoe Bay Rd., 9mi N Atigun Pass, 3100' *+68.23/-149.42*, (VII), CNCI (30). – Prudhoe Bay Rd., 9mi N Atigun Pass, 3100' *+68.27/-149.42*, (VII), CNCI (6). – Prudhoe Bay Rd., near Minnie Creek, 1100' *+67.42/-150.08*, (VII), CNCI (2). – Prudhoe Bay Rd., Snowden Creek, 1700' *+67.75/-149.80*, (VII), CNCI (5). – Prudhoe Bay Rd., Marion Creek, 1000' *+67.33/-150.17*, (VII), CNCI (1). – Bristol Bay Co. Naknek River, King Salmon *+58.69/-156.67*, (VII), CNCI (3). – George Parks Hwy, 48km SW Cantwell, 550m *+63.06/-149.55*, (VI), coll. Gusarov, ZMUN (25). – Kuskokwim River, Bethel *+61.78/-161.75*, (VI), coll. Zanetti (2). — **CANADA: YUKON TERRITORY:** Dempster Hwy., mi26, 2700' *+64.29/-138.44*, (VII), CNCI (113). – Dempster Hwy., mi28, 2500' *+64.32/-138.41*, (VII), CNCI (53), MHNG (6). – Dempster Hwy., mi29.5, 2800' *+64.34/-138.38*, (VII), CNCI (5). – Dempster Hwy., mi32, 2700' *+64.36/-138.34*, (VII), CNCI (5). – Dempster Hwy., mi37, 3000' *+64.40/-138.30*, (VII), CNCI (21). – Dempster Hwy., mi45, 3500' *+64.48/-138.23*, (VII), CNCI (18). – Dempster Hwy., mi45, 3400' *+64.48/-138.24*, (VII), CNCI (1). – Dempster Hwy., mi48.5, North Fork Pass, Ogilvie Mts., 4100' *+64.56/-138.25*, (VI-VII), CNCI (4). – Dempster Hwy., mi60, 3500' *+64.63/-138.35*, (VII), CNCI (10). – Dempster Hwy., mi73, 3300' *+64.76/-138.32*, (VII), CNCI (1). – Dempster Hwy., mi81.5, 2800' *+64.85/-138.22*, (VII), CNCI (6). – Dempster Hwy., mi100.5, Engineer Creek, 3000' *+65.36/-138.20*, (VII), CNCI (56). – Dempster Hwy., mi139.5, 1900' *+65.58/-138.17*, (VII), CNCI (61). – Dempster Hwy., mi154, Ogilvie River, 1900' *+65.70/-138.07*, (VII), CNCI (2). – Dempster Hwy., mi259, Richardson Mts., 1900' *+66.67/-136.28*, (VII), CNCI (14). – British Mts., Fish Creek (84-38), 69°27'N, 140°23'W, 200m, (VI), CNCI (2). – British Mts., (along edge of) Fish Creek (84-49), 69°27'N, 140°19'W, 180m, (VII), CNCI (1). – British Mts., "June Creek", 3km NW Firth R. (84-12), 69°13'N, 140°05'W, 320m, (VI), CNCI (2). – Dawson *+64.07/-139.42*, (VIII), MCZN (7). – 9mi SW Keno, Hansen Lake *+63.85/-135.45*, (VII), CNCI (1). – **BRITISH COLUMBIA:** Alaska Hwy., mi479.3, Prochniak Creek *+59.24/-125.98*, (VII), CNCI (6). – Alaska Hwy., mi445, Peterson Creek *+59.00/-125.78*, (VII), CNCI (40). – Alaska Hwy., mi392, Summit Lake, 5400' *+58.65/-124.63*, (VI), CNCI (1). – Alaska Hwy., mi392, Summit Lake, 4200' *+58.67/-124.62*, (VII), CNCI (1). – Alaska Hwy., mi392, Summit Lake, 4500' *+58.66/-124.62*, (VI), CNCI (1). – Alaska Hwy., mi392, Summit Lake, 4600' *+58.65/-124.62*, (VII), CNCI (5). – Kootenay N. P., Kimpton Creek, 4000' *+50.65/-115.97*, (VII), CNCI (8). – 8mi W Creston *+49.10/-116.68*, (VI), CNCI (1). – Yoho N. P., Otterhead River, 5500' *+51.33/-116.58*, (VIII), CNCI (2). – Yoho N. P., Amiskwi River, 6000' *+51.38/-116.55*, (VIII), CNCI (2). – **ALBERTA:** Jasper National Park, Miette Hot Springs, Sulphur Creek, 4500ft *+53.15/-117.78*, (VII), AMNH (1). – Banff N. P., Mt. Temple, ski lodge, 6600' *+51.35/-116.22*, (VIII), CNCI (2). – Waterton Lakes N. P., Cameron Creek, 5200' *+49.03/-114.01*, (VI), CNCI (2). – Waterton Lakes N. P., Cameron Creek, 4900' *+49.04/-114.00*, (VI), CNCI (1). – Waterton Lakes N. P., Crypt Lake Track, 5100' *+49.02/-113.88*, (VI), CNCI (1). – **ONTARIO:** Lake Superior Provincial Park, Algoma Co. (Can. 113) *+47.75/-84.83*, (VIII), MZLU (1). – Koroc River *+58.85/-65.78*, (VIII), CNCI (5). – **QUEBEC:** Mont-St.-Pierre, 2800' *+49.21/-65.80*, (VII), CNCI (2). – Koroc River *+58.85/-65.78*, (VIII), CNCI (5). – Parc Gaspesie, Mont Albert, 2800' *+48.92/-66.20*, (VII), CNCI (18). – Parc Gaspesie, Mont Albert, 3700' *+48.92/-66.20*, (VII), CNCI (3). – Parc Gaspesie, Mont Albert, 1000' *+48.92/-66.20*, (VII), CNCI (1). – Reserve des Chic-Chocs SE of Ste. Anne des Monts, ca. 2000ft on Mt. Albert Trail *+48.94/-66.12*, (VII), AMNH (1). – **NEW BRUNSWICK:** Madawaska Co., Gagné Brook at First Lake Rd., [47.6077°N, 68.2534°W], (VI), coll Webster (1). – **NEWFOUNDLAND:** Little River, Codroy *+47.87/-59.37*, (VII), coll.

Bolster, MCZN (1). – Doctors Hill (no.121) *+50.76/-57.06*, (VII), coll. Lindroth, BMNH (1♂, 1♀). — **RUSSIA:** Эвенкия р[ека] Столбовая с.п. 118 «Эвенкия, Байkitский р-н, Центральносибирский государственный биосферный заповедник, р. Столбовая, 1,5 км выше устья, выше урочища "Щёки". 50м. В наносах на известняковой гальке.» = Evenkia, Baykit'skiy District, Central Siberian State Biosphere Reserve, Stolbovaya River, 1.5 km up-stream of river mouth, up-stream of 'Shchyoki' tract *+62.09/+91.39*, (VII), coll. Semenov via M. Gildenkova (1). – Красноярск.[ий] кр.[ай] р.[ека] Бирапчан Сп. 68 «Эвенкия, Байkitский р-н, Центральносибирский государственный биосферный заповедник, бассейн р. Столбовая: нижнее течение р. Бирапчана, устье ручья Крутенкий. 110м. Галечник.» = Evenkia, Baykit'skiy District, Central Siberian State Biosphere Reserve, Stolbovaya River basin: lower reaches of Birapchana River, mouth of Krutenkiy Rill *+62.45/+91.54*, (VI), coll. Semenov via M. Gildenkova (1). – Магаданская обл[асть], верх[овья] р[еки] Колымы «Магаданская обл., Тенькинский р-н, хребет Большой Анначаг, окрестности поселка Сибит-Тыэллах, стационар "Абориген", ручей Олень. 800м. Злаковник.» = Magadan Region, Tenkinskiy District, Bolshoy Annachag Mt. Ridge, near Sibit-Tyhellakh, "Aborigine" field research station, Olen' Rill *+61.96/+149.51*, (VIII), coll. Yeskov via M. Gildenkova (1). – Магаданская обл[асть], р[ека] Колыма «Магаданская обл., Тенькинский р-н, хребет Большой Анначаг, окрестности поселка Сибит-Тыэллах, стационар "Абориген", ручей Олень. 800м. Злаковник на галечном берегу ручья.» = Magadan Region, Tenkinskiy District, Bolshoy Annachag Mt. Ridge, near Sibit-Tyhellakh, "Aborigine" field research station, Olen' Rill *+61.96/+149.51*, (VIII), coll. Yeskov via M. Gildenkova (4). – Кемеровская обл[асть] «Кемеровская область, Тисульский район, заповедник "Кузнецкий Алатау", р.Кия, 1 км ниже устья р. Безымянная. 420м. Во мху и подстилке на камнях у ручья, стекающего по крутому склону.» = Kemerovo Area, Tisul'skiy District, "Kuznetskiy Alatau" State Reserve, Kiya River, 1 km below Bezymyannaya River mouth *+54.95/+88.34*, (VII), coll. Ryvkin via M. Gildenkova (1). – East Siberia, Buryatia Republic, Baikalskiy Mts., Gol'zoviy stream, right tributary of Kurkula river [55.096578°N, 108.924678°E], (VII), coll. Shavrin (5). – Chita Area, Kyren'skiy distr., Sokhondinskiy nature reserve, up Zolotoy stream (right tributary of Aguca river), 49°45.353'N, 111°11.670'E, 1580m *+49.76/+111.19*, (VII), coll. Shavrin (11), MSNV (1). – Chita Area, Uletov'skiy distr., Sokhondinskiy nature reserve, stream without name (right tributary of Ingoda river), 2km NE Ashagley winter hut, 49°54.367'N, 111°07.952'E, 1350m, (VII), coll. Shavrin (11). – Chita Area, Uletov'skiy distr., Sokhondinskiy nature reserve, mouth of Ashagley river (right tributary of Ingoda river), 49°54.329'N, 111°07.159'E, (VII), coll. Shavrin (1), HNHM (1). – Chita Area, Uletov'skiy distr., Sokhondinskiy nature reserve, valley of Arshan river (right tributary of Ingoda river) [49°54'26.18"N, 111°07'57.14"E], (VII), coll. Shavrin (1). – Khamar-Daban Mts., Komarinskiy Mts., middle flow of Slyudyanka Riv., 51.587736°N, 103.630056°E, (VII), coll. Shavrin (6), BMNH (7), HNHM (7). – Partisanskiy Distr., Olkhovy river [= Primorye, S Sikhote-Alin, Partizansky ridge, Ol'khovy river], 800-1300 m *+43.31/+133.64*, (V), coll. Pütz (3). – Ussuri-Gebiet, Rajon Partizansk, Poworotnaja-Tal *+42.68/+133.03*, (VI), ZMHB (2). – Ussuri-Gebiet, Partisanskiy rayon, Oberlauf fl. Olchowaja [Ольховая] (r. Zufluss) des fl. Aleksejewka [Алексеевка], 1100-1500m *+43.34/+133.64*, (VII), ZMHB (2), HNHM (1). – Primorskiy Kray, Sikhote-Alin, Biol. Stat., 30km SE Chuguyevka, 44°05'N, 134°12'E, 650m, (VI), SDEI (1). – Lazovskij Distr., Mt. Sestra [= Primorye Terr., S Sikhote-Alin range, Sestra mt.], 1400-1500 m *+43.51/+134.10*, (VIII), coll. Pütz (1). – Primorskiy Kray, Lazovskij Distr., river Elomovsky [= Primorye Terr., S Sikhote-Alin ridge, Partizansky ridge, Lysaja mt., Elamovsky river], 650m *+43.26/+133.70*, (VII), coll. Pütz (3). – Khabarovsk province, Bolshe-Khekhtsirsky Reserve, 400-450m *+48.29/+135.10*, (VI), SMNS (4). – Primorie, Schutzgebiet Lazovskij, Kl. S-j. Log *+43.36/+133.87*, (VI), coll. Schülke (1). – Khabarovskiy kray, Badshalskiy range, Omot lake, taiga, 1165m *+50.54/+134.28*, (VII), coll. Schülke (7). – Khabarovskiy kray, Badshalskiy range, spring of Omot-Makit, 1250-1600m *+50.51/+134.25*, (VII), coll. Schülke (15). – Khabarovskiy kray, Badshalskiy range, end of river Omot-Makit, taiga, 850m *+50.58/+134.32*, (VII), coll. Schülke (9). – Prim., Partizansk distr., Alexeyevsky Khebet, 20km E Sergeyevka, forests near Andreyevka river, 400m *+43.40/+133.58*, (VII), coll. Schülke (12). – Бурятия, Окинский район, долина реки Ходарус, левый приток реки Сенцы, 1200м, у снега (near snow) *+52.60/+99.32*, (VII), coll. Shavrin (6). – Камчатка, Эссо, берег

p[еки] Олгенде, под камнями, 650м *+55.93/+158.70*, (VIII), coll. Gusarov, ZMUN (2). — Камчатка, Эссо, верхнее течение p[еки] Олгенде, 650м, прибрежный галечник *+55.93/+158.70*, (VIII), coll. Gusarov, ZMUN (3).

Ochtheophilus praepositus Mulsant & Rey, 1878

NON-TYPE MATERIAL EXAMINED: **SPAIN:** Prov. Girona, Pyrenees, N Puerto Toses, bw. Puigcerda and Ribes, 1660m *+42.35/+01.99*, (X), SDEI (3). — **FRANCE:** Hautes Alpes, Villar d'Arène, Ref. de la Blanche, 1990m *+44.69/+06.88*, (VIII), coll. Lott, BMNH (1). — Hautes Alpes, Galibier Sud, 2350m (167) *+45.05/+06.41*, (VIII), MHNG (1). — La Rochette (S.), Le Joudron *45.44/+06.15*, coll. Mequignon, MHNG (2). — Hautes prov., Annot, Vaire, 900m *43.95/+06.68*, (VI), coll. Wunderle (1). — Alpes Ht., Queyras, Lac Égorgéou, 2380m *44.73/+06.99*, (VII), coll. Tempère, MHNG (1). — Haute-Savoie, Novel, 1300m *+46.37/+06.79*, (VII), coll. Last, MMUE (1). — Savoia, Valloire, rive galoire Valloirette, contre-bas Route vers. le Villard, 1400m *+45.17/+06.43*, (VIII), coll. Bureau, SMNS (4). — Savoie, Plan-Lachat s/Valloire, 2000m *+45.92/+06.83*, (VIII), MHNG (2). — [Le Col de la] Cayolle [per] Bayasse, 2500m *+44.30/+06.74*, (VII), coll. Ochs, MHNG (13). — dept. Isère, Col de la Croix-Haute, 1150m and 1170m *44.72/+05.68*, (VI and X), MHNG (4). — dept. Isère, umg. Voiron *+45.36/+05.59*, (VI), coll. Lohse, MHNG (4). — Mt. Dore *+45.58/+02.83*, coll. Fauvel, ISNB (1). — Alpes-Maritimes, Saint-Martin - Vesubie, ca. 1250m *+44.07/+07.25*, (V), coll. Wunderle (2). — Alpes-Maritimes, [Saint Dalmas le Selvage,] Cascade de Vens *+44.30/+06.90*, (IX), coll. Ochs, MHNG (1). — Hautes Pyrénées, between les Lacs de Long & d'Orédon, 6500-7500ft *+42.83/+00.17*, (IX), BMNH (8). — Hautes Pyrénées, near Arreau, 2500ft *+42.91/+00.36*, (IX), BMNH (2). — Argentièrre près Chamonix *+45.98/+06.93*, coll. Fauvel, ISNB (1), coll. Binaghi, MCSN (4). — Pyrénées-Orientales, Canigou, Marialle, 1800m *+42.50/+02.41*, (VI), coll. Jarrige, MNHP (4). — Pyrénées-Orientales, Vernet *+41.91/+01.04*, (VI), coll. Last, MMUE (1). — **GERMANY:** Gross-Gerau *+49.92/+08.48*, (IV), coll. W. Sattler, SMFD (1). — Garching bei München, Isar *+48.25/+11.65*, (IV), ZSMC (2). — Südbayern, Schliersee *+47.74/+11.86*, (IX), ZSMC (1). — Baden-Württemberg, Isny in Allgäu, Schw. Grat *+47.70/+10.03*, (VI), coll. Ulbrich, SMNS (2). — N Baden-Württemberg, Geddelsbach, S Öhringen, *+49.15/+09.50*, (IV), SMNS (1). — Gr. Hesselöhe (München), Isar *+48.09/+11.53*, (IX), coll. Ihssen, ZMHB (1). — Ahrweiler *+50.55/+07.08*, coll. Hauser, NHMW (5). — Oberbayern, Garmisch *+47.50/+11.10*, (IV-V, VII and X), coll. Ihssen, ZMHB (27). — Oberbayern, Eschenlohe, Murnau *+47.83/+11.20*, (VI and VIII), coll. Ihssen, ZMHB (5). — Oberbayern, Oberau *+47.55/+11.15*, (VI), coll. Lohse, MHNG (4). — Oberbayern, Farchant *+47.53/+11.12*, (V), HNHM (1). — Bad Wimpfen *+49.23/+09.13*, coll. Pfaff, SMFD (1). — **SWITZERLAND:** Kt. Graubünden, Scuol, Pradella (It409s), 46°47.98'N, 10°19.19'E, (VIII), coll. Vorst (1). — Kt. Graubünden, S.[ankt] Moritz *+46.49/+09.84*, (VIII), MHNG (1). — Kt. Graubünden, Gafia / St. Antönien, 2000m *+46.97/+09.81*, (IX), MHNG (4). — [Kt. Grisons,] Arosa *+46.78/+09.68*, (VI), coll. Last, MMUE (1). — Lac de Joux, les Bioux *+46.65/+06.32*, (IV), coll. Rehous, MHNG (1). — Kt. Genève, Chancy (15km SW Genf), la Laire, 350m *+46.15/+05.97*, (V-VI), coll. Gollkowski (2), coll. Rehous, MHNG (3). — Kt. Vaud, la Comballaz *46.38/+07.08*, (VII), ZSMC (1). — Kandersteg *+46.50/+07.67*, (VII), coll. W. Sattler, SMFD (4), coll. H. Bücking, SMFD (1). — Kt. Graubünden, Vals [region Raetia] *+46.62/+09.18*, (II and VIII), coll. Jörgen, NHMB (9). — Kt. Vaud, Alpes Vaud (either Villars-sur-Ollon or Gryon) *+46.30/+07.05* or *+46.27/+07.10*, (VIII), coll. Mathey, NMBS (4), MHNG (1). — Kt. Vaud, Anzeindaz *+46.29/+07.16*, (IX), BMNH (1). — Kt. St. Gallen, Vättis, Vättental, 900m *+47.17/+10.92*, (VI), coll. Kapp (1). — Kt. Valais, Morgins, 1500m *+46.23/+06.85*, (VI), SEMC (4), SDEI (2). — Kt. Wallis, Walliser Alpen, Zinal, 1700m *+46.14/+07.62*, (VI), coll. Gollkowski (1). — Kt. Valais, Mattmark *+46.05/+07.96*, (VIII), MHNG (1). — Kt. Valais, Champex *+46.03/+07.12*, (VII), MHNG (1). — Kt. Valais, Les Marécottes, Le Trient (river), 800m *+46.10/+07.00*, (VII), coll. Toumayeff, MHNG (3). — Kt. Valais, Barges près Vouvry, SFRA-changins *+46.33/+06.88*, (IX), MHNG (6). — Kt. Valais, Vuise / Conthey *+46.23/+07.31*, (VI-VII), MHNG (1). — Kt. Valais, Mission *46.19/+07.59*, (VII), MHNG (3). — Kt. Bern, Napfgebiet, Churzenei, 1000m *+47.02/+07.82*, (VII), coll. Kiener, MHNG (1). — Kt. Bern, Hasle, Emmeufer *+46.98/+08.05*, (VI and X), coll. Kiener, MHNG (2). — Kt. Luzern, Eigental [Forenmoos], 970m *+47.02/+08.22*, (VIII), MHNG (1). —

Kt. Luzern, Romoos, Neumatt, 700m *47.01/+08.03*, (VIII), MHNG (1). – Kt. Berner Oberland, Isenfluh, 1500m *+46.62/+07.88*, (VIII), MHNG (2). – Kt. Bern, Unterlauf Kander, Thun *+46.72/+07.65*, (VII), MHNG (1). – Kt. Ticino, Gordola, Bolle di Magadino *+46.17/+08.85*, (X), MHNG (1). – Kt. Vaud, [Ormont-Dessous,] Pic Chaussy (peak), Waldgebiet, Oudoux, 1700m *46.38/+07.12*, coll. Bernhauer, FMNH (2). — **AUSTRIA:** Carinthia, Freibach-Stausee *+46.51/+14.44*, (VI), coll. Ullrich, MHNG (3). – Kärnten, umg. Windische Höhe, 1100m *+46.63/+13.55*, (X), ZSMC (1). – Kärnten, Villach *+46.62/+13.83*, (VIII), NHMW (1). – Kärnten, Karnische Alpen, Valentinsalp, Kötschach, 1500m *+46.67/+12.99*, (V and VII), coll. Lohse, MHNG (23). – Kärnten, Spittal *+46.78/+13.48*, (IX), coll. Renner (1). – Kärnten, Millstatt *+46.81/+13.57*, (VIII), coll. Renner (1). – Kärnten, Karawanken, Hadersdorf *+46.62/+13.54*, (IX), coll. Lohse, MHNG (4). – Kärnten, Karawanken, Waidisch b. Ferlach *+46.50/+14.35*, (VII, VIII and X), coll. Renner (2), coll. Lohse, MHNG (13), coll. W.G. Ullrich, MHNG (2). – Niederösterreich, Stiefern. *48.53/+15.69*, (X), NHMW (1). – Nordtirol, Kaprunertal *+47.22/+12.72*, (VIII), ZSMC (1). – Tirol, umg. Innsbruck, Thaur *+47.29/+11.47*, (VII), ZSMC (1). – Innsbruck, Höttingergraben *+47.30/+11.35*, (V), coll. Petrenko (4). – Maxglan bei Salzburg, Herm. Frieb. *+47.80/+13.02*, coll. Schaaff in coll. Bosch, SMFD (1). – Styr-Gesäuse, Gstatterboden *+47.60/+14.50*, (VIII), ZSMC (1). – Tirol, Ötztaler Alpen, Vent, 1900m *+46.86/+10.91*, (VII), coll. Gollkowski (1). – Vorarlberg, Bregenz, Lochau, Leiblach-Mündung umgeb., Bodensee-Ufer, 400m *+47.53/+09.73*, (V), coll. Gollkowski (1). – Salzburg, Lungau, Unterweissburg *+47.09/+13.60*, (IX), coll. Papperitz, SMNS (1). – Salzburg, Lungau, St. Andrae (- Lintsching) *+47.15/+13.78*, (IX), coll. Papperitz, SMNS (1). – Kärnten, Trögern, Potokgrab. *+46.44/+14.49*, (VI-VII), coll. Wunderle (1). – Kärnten, Zell-Pfarre *+46.47/+14.39*, (VII), coll. Assing (3). – Kärnten, Plöcken-pass *+46.60/+12.96*, (VII), SMNS (1). – Kärnten, Feld am See *+46.78/+13.75*, (VIII), SMNS (1). – Kärnten, Koschuta, 1000-2000m *+46.47/+14.42*, (VI), coll. Ulbrich, SMNS (3). – S-Kärnten, Koschuta, Babucnikgraben *+46.48/+14.38*, (VI), coll. Papperitz, SMNS (3). – S Kärnten, Zell-Freibach *+46.47/+14.43*, (VII), coll. Papperitz, SMNS (3). – Kärnten, Eisenkappel *+46.48/+14.59*, (VII), coll. Ulbrich, SMNS (6). – Karawanken, Zeil-Hudajuzna *+46.17/+13.92*, (VIII), coll. Papperitz, SMNS (3). – Vorarlberg, Silbertal / Montafon, 1000-1100m *+47.04/+09.95*, (V), coll. Renner (1). – Vorarlberg, Raggal, Marul Oberhalb Unt. Lagutzalpe, 1650m *+47.22/+09.83*, (VIII), coll. Kapp (6). – Vorarlberg, Au, Kanisfluh - umgeb. Oberlealpe, 1500m *+47.32/+09.97*, (VI), coll. Kapp (7). – Vorarlberg, Au, Strasse Oberlealpe, 1350-1450m *+47.32/+09.98*, (VI), coll. Kapp (1). – Vorarlberg, Vandans, Reliskapelle, H. H. Hütte, 1490m *+47.08/+09.87*, (VI), coll. Kapp (3). – Vorarlberg, Vandans, Valkastiel, Tobel Klamperatür, 860-1050m *+47.10/+09.82*, (VII), coll. Kapp (1). – Vorarlberg, Varth, Kalbelsee, 1650m *+47.25/+10.18*, (VIII), coll. Kapp (3). – Vorarlberg, Lech, Formarinsee, Strasse Freiburger - Formarinale, 1860m *+47.17/+09.98*, (VIII), coll. Kapp (2). – Vorarlberg, Lech, Spullerbach - Mündung - Alpele, 1560-1610m *+47.16/+10.06*, (V), coll. Kapp (1). – Vorarlberg, Thüringen, Märchentäl, 680m *+47.20/+09.77*, (V), coll. Kapp (1). – Vorarlberg, Lustenau, Rheinvorland, 420m *+47.43/+09.65*, (VI), coll. Kapp (1). – Vorarlberg, Bürs, Umspannwerk U, ca. 580m *+47.15/+09.80*, (VIII), coll. Kapp (1). – Vorarlberg, Mittelberg, Baad, Inner Turaalpe, 1450m *+47.31/+10.12*, (VI), coll. Kapp (1). – Vorarlberg, Mittelberg, Hirschegg, Schwarzwassertal, 1200-1300m *+47.33/+10.17*, (V), coll. Kapp (5). – Vorarlberg, Mittelberg, Schwarzwassertal *+47.33/+10.09*, (VIII), coll. Kapp (1). – Vorarlberg, Mittelberg, Hintergemstälpe, 1370m *+47.28/+10.15*, (V), coll. Kapp (5). – Vorarlberg, Mittelberg, Auenhütte, Schwarzwasserbach, 1250m *+47.33/+10.13*, (VI), coll. Kapp (1). – Vorarlberg, Mittelberg, Heuberg Hütte, Lawinenverbauung, 1600-1620m *+47.15/+09.97*, (VI), coll. Kapp (1). – Vorarlberg, Feldkirch, Illspitz, 420m *+47.23/+09.60*, (V), coll. Kapp (4), coll. Moosbrugger, NHMW (2). – Kaisergebirge, Hinterbärenbad *+47.58/+12.28*, (VI), coll. Stöcklein, NHMB (4). – Steiermark, Hochschwabgebiet, Fölzgraben, 800-830m *+47.55/+15.22*, (VII), coll. Kapp (7). – Steiermark, Hochschwabgebiet, Bodenbauer Karlgraben, 850m *+47.57/+15.10*, (VII), coll. Kapp (4). – Steiermark, Hochschwabgebiet, Fölz, Endriegelgraben, 700m *+47.52/+15.23*, (VII), coll. Kapp (5). – Steiermark, Hochschwabgebiet, Seewiesen, Seetal, 1100m, waterfall *+47.62/+15.27*, (VII), coll. Kapp (4). – Steiermark, Hochschwabgebiet, Thörl-Hinterberg, 650-700m *+47.52/+15.24*, (VII), coll. Kapp (3). – Steiermark, Hochschwabgebiet, Jauring, Feistringgraben, 700-750m

+47.55/+15.25, (VII), coll. Kapp (1). – Steiermark, Hochschwabgebiet, Jauring b. Aflenz, Feistringgraben, 780-840m *+47.56/+15.24*, (VII), coll. Kapp (2). – Steiermark, Hochschwabgebiet, Thullin b. Aflenz, Stübmingsbach, 720m *+47.54/+15.30*, (VII), coll. Kapp (1). – Steiermark, Hochschwabgebiet, Grassnitz b. Aflenz zum Bergerbauer, 900-1000m *+47.55/+15.30*, (VII), coll. Kapp (1). – Steiermark, Hochschwabgebiet, Bodenauer/Festlau - Innerzwain, 760-850m *+47.55/+15.16*, (VI), coll. Kapp (4). – Tirol, Lechtal Str. ins Namlostal bis Namlos, 1200-1225m *+47.36/+10.60*, (V), coll. Kapp (2). – Ötz-Umhausen *+47.17/+10.92*, (VIII), coll. Bernhauer, FMNH (1). – Carinthia, Millstatt, Schlucht, 700m *+46.80/+13.58*, coll. Bernhauer, FMNH (1). – Osttirol, Ainet *+46.87/+12.70*, (VII), coll. Koneczny, FMNH (1). – Osttirol, Thal *+46.78/+12.65*, (VI), coll. Koneczny, FMNH (1). – Lavant, Drau *+46.64/+14.94*, (VIII), coll. Koneczny, FMNH (1). – Tirol, Lech-Tal, Elmen, 976m, Edelbach-Ufer *+47.33/+10.53*, (V), coll. Gollkowski (14). – Tirol, Lech-Tal, Stanzach, 939m [900-1300m] *+47.38/+10.57*, (V), coll. Gollkowski (3), coll. Assing (3). – Tirol, Stanzach/Lech, Namloser Tal *+47.37/+10.62*, (V), coll. Gollkowski (22), coll. Renner (2). – Carinthia, Sachsenburg *+48.83/+13.36*, coll. Stenius, MZHF (3). – Tirol, Lechtal, Elmen, Edelbach, 950-1000m *+47.33/+10.53*, (V), coll. Schülke (1). – Lunz, Austr. inf., (Untersee – Biol. Stat.) *+47.85/+15.05*, (VI-VII), MHNG (9). – Tirol, Bieberwier [Biberwier] *+47.38/+10.90*, (VIII), coll. Lohse, MHNG (34). – Karnische Alpen, Plöckenpassgebiet *+46.60/+12.96*, (IX), coll. Wunderle (1). – Kärnten, Trögern, Potokgrab. *+46.47/+14.50*, (VI-VII), coll. Wunderle (1). – Kärnten, Karawanken, Hochobir, 1500-2000m *+46.50/+14.48*, (VII), coll. Wunderle (2). – Kärnten, Eisenkappel surroundings *+46.48/+14.59*, (VI-VII), coll. Wunderle (3). – Kärnten, Karawanken, Eisenkappel, Ebriachbach *+46.49/+14.59*, (VII), coll. Wunderle (3). – Fulpmes, Tirol *+47.17/+11.35*, (V), ZMHB (1). – Pusterthal *+46.83/+12.33*, (VI), coll. Bernhauer, FMNH (4). – Lofer, Salzburg *+47.58/+12.68*, coll. Bernhauer, FMNH (7), ZMHB (1), NMPC (1). – Gross-Hollenstein *+47.80/+14.77*, (VIII), NHMW (1), FMNH (4). – Waidhofen a. Ybbs *+47.95/+14.80*, in part coll. Scheerpeltz, NHMW (5), coll. Bernhauer, FMNH (3). – Tirol, umg. Landeck *+47.13/+10.57*, coll. Strupi, NHMW (1). – Tirol, Kerschbaumeralm *+47.33/+13.80*, (VIII), NHMW (9), coll. Stockmann, MZHF (2). – Spitzegel, Gailtal. Alp. *+46.65/+13.42*, coll. Scheerpeltz, NHMW (1). – Carinthia, Gailtaler Alpen, umg. Windische Höhe, Kreuzen *+46.63/+13.56*, (V and X), coll. Strupi and coll. Scheerpeltz, NHMW (3). – Kärnten, Mauthen im Gailtal *+46.66/+13.00*, (VII), coll. Lohse, MHNG (1). – Kamptal *+48.55/+15.65*, (V), NHMW (1). – umg. Wien, Mauerbach *+48.23/+16.15*, coll. Scheerpeltz and coll. Klima, NHMW (3). – Valentinal, Karn. Alp. Bach *+46.67/+13.02*, (VII), coll. Scheerpeltz, NHMW (1). – Pinzgau (Salzburg) *+47.25/+12.67*, coll. Klima, NHMW (1). – Radstädter Tauern, Golling an der Salzach *+47.60/+13.17*, (VIII), coll. Skalitzky, NHMW (1). – Kärnten, Süd-Tauern, Polinik *+46.90/+13.15*, coll. Scheerpeltz, NHMW (1). – Stuben, Arlberg-Gebiet *+47.13/+10.17*, NHMW (2), coll. Stenius, MZHF (2). – Carinthia, Grund-Graben *+46.73/+13.37*, coll. Konsensegg, NHMW (4). – Ybbsitz, Prolingbach *+47.93/+14.88*, (IX), coll. Pinker, NHMW (2). – Carinthia, Remschenig-Graben bei Eisenkappel, Uschova-Bach, ca. 1300m *+46.48/+14.58*, (VII), coll. Scheerpeltz, NHMW (2). – umg. Werfen, Eugen-Klamm *+47.47/+13.18*, (VIII), coll. Pinker, NHMW (2). – Spittal an der Drau *+46.80/+13.50*, coll. Scheerpeltz, NHMW (11). – Schafberg *+47.78/+13.45*, NHMW (7). – Plomberg *+47.80/+13.37*, NHMW (2). – Tirol, umg. Westendorf *+46.43/+12.22*, coll. Strupi, NHMW (1). – Karawanken, Trögerner Klamm b. Eisenkappel *+46.43/+14.48*, (VI and IX), coll. Schülke (10), coll. Scheerpeltz, NHMW (2). – Karawanken, Schworg-graben bei Waidisch *+46.50/+14.35*, (IX), coll. Scheerpeltz, NHMW (1). – Kärnten, Vellach Tal *+46.58/+14.48*, coll. Bernhauer, FMNH (1), NMPC (1). – Carinthia, Eisenkappel, Vellachufer *+46.49/+14.59*, (VIII), coll. Bernhauer, FMNH (1). – Carinthia, Koschuta, Kalter Bach *+46.47/+14.42*, (IX), coll. Strupi and coll. Scheerpeltz, NHMW (4). – Windischgarsten *+47.72/+14.33*, (VIII), coll. Stenius, MZHF (1), NMPC (1), coll. Mancini, MCSN (5). – Tirol, Matrei Waldrasterbach, 1500m *+47.13/+11.45*, (VIII), SDEI (4). – Steiermark, Bergbau b. Hohentauern, Sunkbach, 1130m *+47.45/+14.46*, (VIII), SDEI (3). – Riezlern, Kl. Valsertal (Vorarlberg) *+47.35/+10.18*, (VI), coll. Künnemann, SDEI (4). – Allgäu *+47.40/+10.25*, coll. Kraatz, SDEI (1). – Bärndorf b. Rottenmann *+47.51/+14.26*, coll. Moosbrugger, NHMW (8), coll. Liebmann, SDEI (1). – Loibltal (Karawanken), 1000m *+46.46/+14.25*, (VI), coll. Smetana, CNCI (3). – Lesachtal, Obertilliach *+46.67/+12.75*, (VI), coll. Smetana, CNCI (1). –

Winklertal (Karnische A.), 1500-1700m $*+46.71/+12.50^*$, (VI), coll. Smetana, CNCI (38). – Grossglockner Geb. bis Zell/See $*+47.32/+12.80^*$, (VI), coll. Smetana, CNCI (20). – Arlberg, Albona $*+47.10/+10.15^*$, ZSMC (2). – Wildensteiner Bach (Kärnten), Fall, 1200m $*+46.56/+14.48^*$, (VIII), ZSMC (14). – Ötscher-Gebiet, Ötscher, A. i. $*+47.85/+15.20^*$, (VII), in part coll. Scheerpeltz, NHMW (13). – Hochschwab, umg. Bodenbauer, Schottermure d. Wildbaches, ca. 850-1000m $*+47.57/+15.10^*$, (VII-VIII), coll. Scheerpeltz, NHMW (7). – Kirchberg am Wechsel $*+47.60/+15.98^*$, coll. Schuster, NHMW (1). – Stuhleck St. (Wechselgebiet) $*+47.56/+15.78^*$, coll. Klima, NHMW (2). – Kärnten, Vellach Tal $*+46.58/+14.48^*$, coll. Moosbrugger, NHMW (3). – Bad Vellach (S-Kärnten), 600-1000m $*+46.42/+14.55^*$, (VI) coll. Bernhauer, FMNH (1), coll. Schülke (2). – Salzburg, Wasserfall Aigen, Schotterbank unt. dem Fall $*+47.78/+13.08^*$, (VII), coll. Bernhauer, FMNH (1), coll. Stenius, MZHF (1). – Kötschachtal (Hohe Tauern) $*+47.13/+13.15^*$, coll. Bernhauer, FMNH (11). – Badbruck, Gasteinertal, 800m $*+47.13/+13.13^*$, (VI), coll. Bernhauer, FMNH (2). – Gasteinertal, Fichtenreisig, waterfall, 800m $*+47.18/+13.10^*$, (VI), coll. Bernhauer, FMNH (1). – Badgastein, Gravenegg, 900m und Grüner Baum $*+47.12/+13.13^*$, (VI), coll. Bernhauer, FMNH (6), NHMW (2), ISNB (1). – Hofgastein, Angertal $*+47.16/+13.10^*$, (VII), coll. Bernhauer, FMNH (16). – Tirol, Gramais, Lechtal $*+47.27/+10.53^*$, (VII), coll. Rebmann, SMFD (4), NMPC (2). – Grünburg $*+46.85/+14.57^*$, NHMW (1). – Karwendl-Gebirge, umg. Innsbruck (Nord-Tirol) $*+47.30/+11.40^*$, NHMW (19), coll. C. Bosch, SMFD (4), coll. C. Stock, SMFD (4), coll. K. Daniel, SMFD (3), coll. Bernhauer, FMNH (6). – Fieberbrunn (Tirol) $*+47.45/+12.55^*$, coll. Bosch, SMFD (1). – (Hof-) Gastein (Salzburg), Anlaufthal $*+47.08/+13.13^*$, (VI-VII), in part coll. Skalitzy, NHMW (9), coll. Bosch, SMFD (3). – Schladming (Nord-Steiermark) $*+47.38/+13.68^*$, coll. Schuster, NHMW (5), coll. Kouřil, NMPC (1), coll. Palm, MZLU (1). – Fölz bei Aflenz $*+47.53/+15.23^*$, coll. Kaufmann, NHMW (8). – Aflenz (Nord-Steiermark) $*+47.53/+15.23^*$, coll. A. Krogh, SMFD (1), coll. Streda, HNHM (1), coll. Stenius, MZHF (1), in part coll. Schuster, NHMW (3). – Admont $*+47.57/+14.45^*$, coll. Speiser, HNHM (2). — **ITALY:** Südtirol, Hohen bei Auer $*+46.34/+11.32^*$, (VII), coll. Lohse, MHNG (7). – Südtirol, Penser Joch $*+46.82/+11.44^*$, (VIII), coll. Lohse, MHNG (4). – Parco Lessinia, Val Fraselle $*+45.66/+11.13^*$, (VII), coll. Zanetti (1). – Pezzoro (BS), Grottola, 1000m $*+45.75/+10.22^*$, (V), coll. Zanetti (6). – Bergamo, Alpi Orobie, Passo di San Simone $*+46.05/+09.71^*$, (VII), coll. Assing (1). – Ligurien, Mte. Maggiorasca $*+44.34/+09.32^*$, (VII), coll. Lohse, MHNG (3). – Emilia-Romagna: Parma, Agna, T. Parma (It6230), $44^{\circ}29.30'N$, $10^{\circ}06.09'E$, 514m, (V), coll. Vorst (2). – Emilia-Romagna: Parma, Bosco, Marra (It620i), $44^{\circ}28.42'N$, $10^{\circ}02.81'E$, 614m, (V), coll. Vorst (1). – Emilia-Romagna: Parma, Corniglio, T. Bratica (It6030), $44^{\circ}28.09'N$, $10^{\circ}05.88'E$, 596m, (V), coll. Vorst (1). – Trentino-Alto Adige, Sulden (It424j), $46^{\circ}31.44'N$, $10^{\circ}35.43'E$, (VIII), coll. Vorst (2). – Ligurien, Mte. Maggiorasca $*+44.55/+09.48^*$, (VII), coll. Lohse, MHNG (1). – Raibl $*+46.45/+13.57^*$, (VII), coll. Fodor, HNHM (1). – Aosta valley, Cogne, 1500m $*+45.61/+07.36^*$, (VII), coll. Renner (1). – M[ont] Cenis, Bardonecchia $*45.08/+06.70^*$, coll. Rambousek, NMPC (2). – Tirol m., Rovereto $*+45.90/+11.03^*$, coll. Rambousek, NMPC (1). – Alpi Carniche, SW M. Coglians Collina, Rif. Tolazzi, 1350m $*+46.59/+12.85^*$, (VII), coll. Assing (15). – Piemonte (CN), bank of Stura river, E Argentera, 1500m $*+44.39/+06.95^*$, (V), coll. Assing (1). – Trentino, Val di Non, NE Coredò, Val di Verdes, 1000m $*+46.38/+11.12^*$, (VIII), coll. Assing (1). – Trentino, E Trento, N Roncagno, 700-1600m $*+46.08/+11.39^*$, (VI), coll. Assing (2). – Piemonte (CN), Valle de Vareita, C. di Sampeyre, 1300m $*+44.57/+07.17^*$, (VII), coll. Wunderle (2). – Piemonte, Frabosa Sottana (CN), 650m $*+44.30/+7.78^*$, (V), coll. Assing (1). – Südtirol, Altenburg/Kalern [Caldaro], ca. 600m $*+46.42/+11.23^*$, (VII), ZSMC (1). – Carnia $*+46.39/+12.77^*$, (VIII), SMNS (1). – Lombardia, Campolario (W of Lago d'Idro), 1660m $*+45.78/+10.51^*$, (VI), coll. Gollkowski (2). – Friuli - Ven. Giul., Isonzo-ufer, SE Villesse (7), $45^{\circ}51'11"N$, $13^{\circ}27'04"E$, 10m, (IX), coll. Schülke (1). – Friuli - Ven. Giul., Fella-Ufer W Carnia (5), $46^{\circ}23'N$, $13^{\circ}07'E$, 250m, (IX), coll. Schülke (2). – Friuli - Ven. Giul., Fella-mündung in den Tagliamento, 250m $*+46.37/+13.12^*$, (IX), coll. Schülke (7). – Lessini, Revolto $*+45.68/+11.22^*$, (VII), MSNV (1). – Longarone (BL), Provagna, 400m, bank of Piave $*+46.27/+12.29^*$, (IV), coll. Zanetti (1). – Civezzano, Val Sugana $*+46.08/+11.18^*$, (X), coll. Zanetti (1). – Carnia: Tolmezzo (UD), pied Mte. Amariana, 400m $*+46.39/+13.05^*$, (VI-VII), ISNB (1). – Cosizza dint. (UD), river Cosizza $*+46.15/+13.55^*$, (V), coll. Zanetti (1). – Val di Tovel (TN), Capriolo, 700m $*+46.27/+10.95^*$, (VIII), coll. Zanetti (2). – Gruppo di Brenta,

Malga Pozzol, 1600m *+46.17/+10.92*, (VII), coll. Zanetti (1). – Giazza (VR), in canyon, 1000-1200m *+45.65/+11.12*, (V and X), coll. Zanetti (2). – Coredò (TN), bank of river Verdes, 1000m *+46.37/+11.08*, (VI), coll. Zanetti (34). – Smarano/Vervò, Tres/Coredò (TN) *+46.30/+11.12*, (VIII), coll. Zanetti (1). – Smarano (TN), banks of Verdes near spring, 1000m *+46.35/+11.10*, (VII-VIII), coll. Zanetti (14). – between Caldaro (BZ) and Ronzone (TN) *+46.41/+11.19*, (VIII), coll. Zanetti (1). – Torino, Sestriere (166A) *+45.97/+07.97*, (VIII), MHNG (1). – Piemonte, Novara, Macugnaga and environment *+45.97/+07.97*, (VIII), coll. Zanetti (1). – Foresta di Pramorio (Paluzza - UD), 1300-1500m, Casera del Bosco *+46.53/+13.02*, (VII), coll. Zanetti (1). – Tuenno / Lago di Tovel (TN), 600/1000m (autokäscher) *+46.33/+11.02*, (VIII), coll. Zanetti (13). – Veneto, Valle di Revolto, P. d'Illasi, 800m *+45.67/+11.12*, (VI), coll. Wunderle (2). – Julische Alpen, Friaul, Torrente Mea am Wasser-Ursprung *+46.40/+13.30*, (IX), coll. Scheerpeltz, NHMW (2). – Tirol, Val. Fondo *+46.43/+11.13*, coll. Kaufmann, NHMW (1). – Lessinische Alpen, Piano della Fugazza *+45.75/+11.17*, NHMW (1). – Cottische Alpen, Bardonecchia *+45.08/+06.70*, NHMW (1). – Julische Alpen, Tarvis [Tarvisio] *+46.50/+13.58*, in part coll. Luze, coll. Scheerpeltz and coll. Birnbacher, NHMW (20), coll. Reitter and coll. Streda, HNHM (6), coll. Bernhauer, FMNH (5), coll. Bosch, SMFD (1), coll. Polentz, UWCP (2), ZMHB (1). – Terme di Valdieri, Val. Gesso *+44.20/+07.27*, (VIII), coll. Pinker, NHMW (1). – Santuario d'Oropa, Biellese, Piemont *+45.63/+07.98*, (VI), coll. Binaghi, MCSN (4). – Alto Adige, Valle Aurina, Casere *+46.80/+11.83*, (VIII), MCSN (1). – Rezzoaglio d'Aveto, Liguria *+44.53/+09.38*, (IX-X), coll. Binaghi, MCSN (4). – Stazzema, Alpi Apuane *+43.98/+10.32*, (VI), coll. Mancini, MCSN (1). – Abruzzo, Gran Sasso *+42.45/+13.70*, ZMHB (1). – Tirol, Prad an der Stilfserjochstrasse, 900m *+46.15/+11.73*, (VII), SDEI (38). – Alpi Apuane, 8km SWW Piazza al Serchio, 700-1000m *+44.17/+10.27*, (IX), coll. Gusarov, ZMUN (4). – Idro (Bresc) *+45.73/+10.48*, (VII), SEMC (1). – Lago di Garda *+45.67/+10.68*, SMFD (1). – Cuneo (Prov.), Valle Varaita, Chianale, 1750m *+44.65/+06.98*, (VI), coll. Kapp (3). – Colle dell'Agnello, 1820m *+44.68/+06.98*, (VI), coll. Kapp (2). – Sicilia, NW Francavilla, 480m *+37.93/+15.10*, (V), coll. Assing (2). — **SLOVENIA:** Julische Alpen, Triglav, Oberhalb Kranjska Gora, Pisinica-Fluss, 750m (830m) *+46.48/+13.79*, (VII), coll. Kapp (1), coll. Gollkowski (29). – Triglav, Triglav Narodni Park, Soca Serovc, 520m *+46.33/+13.77*, (VII), coll. Kapp (2). – Bacher Gebirge [Pohorje] *+46.50/+15.45*, (VII), coll. Fodor, HNHM (5). – Carintha m., Savinjske Alpe *+46.38/+14.58*, coll. Roubal, SNMC (1), coll. Rambousek, NMPC (2). – Wochein [Bohinj] *+46.25/+13.98*, (VII-VIII), in part coll. Pinker, NHMW (18). – Mariborski Otok *+46.57/+15.62*, coll. Peyer, PMSL (3). – N Kamnik, Bistrica-Tal, 500m *+46.29/+14.62*, (IX), SMNS (1). — **CZECH REPUBLIC:** Riesengebirge, Spindelmühle *+50.73/+15.62*, (VII), coll. Skalitzky and coll. Scheerpeltz, NHMW (3), NMPC (2). – Radotín (Bohemia) *+49.98/+14.36*, (VII), coll. Roubal, SNMC (1). – Paskau [Paskov] *+49.74/+18.29*, coll. Reitter, HNHM (6). – Altvater [Praděd or Klaičky Snežník] *+50.08/+17.24*, coll. Kolbe, UWCP (4). — **POLAND:** Ohlau [Oława] *+50.95/+17.30*, coll. Kolbe, UWCP (2). – Wölfelsgrund [Międzygórze] *+50.21/+16.78*, (VII and X), coll. Polentz and coll. Kolbe, UWCP (6). – Silesia, Teschen [Cieszyn] *+49.77/+18.60*, coll. Bosch, SMFD (1), coll. Liebmann, SDEI (1), ZMHB (1) SMNS (1). — **SLOVAKIA:** Bratislava, Devin *+48.17/+16.98*, (IX), ZMHB (1). – Veporske vrchy, 2km SSE Závadka, Dolina Hronca, stream Hronec, on bank and in stream (040), 48°49'29"N, 19°56'01"E, 690m (VII), (HNHM (1). – Veporské vrchy, 2.5km SE Hel'pa, valley of stream Ráčov (Postal'), small, very dark streambed (041), 48°50'35"N, 19°59'52"E, 660m (VII), HNHM (1). – Ždiar, Biela-ufer, 950m *+49.27/+20.26*, (VII), coll. Schülke (4). – Nízke Tatry, Demänová, 770m *+49.07/+19.58*, (VI), coll. Gollkowski (1). – Cergov, Hertník, 560m *+49.22/+21.25*, (VIII), coll. Gollkowski (2). – Carp., Trenčín *+48.90/+18.05*, coll. Lindberg, MZHF (1), coll. Kouřil, NMPC (1). – Liptau *+49.20/+19.92*, ZMHB (1), MZHF (1). – Spišská Magura, Rieka-Tal, 800-1000m *+49.40/+20.35*, (VII), SDEI (1). – Tatranská Lomnica *+49.16/+20.28*, (VII), coll. Smetana, CNCI (16). – Bielowodská dolina (Vysoké Tatry) *+49.25/+20.13*, (VII), coll. Smetana, CNCI (2). – Livovská Huta (Čerh. Poh.) *+49.24/+21.03*, (VII), coll. Smetana, CNCI (12). – Pol'anská dolina (Nízke Tatry) *+48.93/+19.53*, (VII), coll. Smetana, CNCI (7). – Malá Fatra, Smilovská dolina *+49.19/+19.04*, (VII), coll. Smetana, CNCI (8), coll. Ochs, MHNG (1). – Malá Fatra, Vratna dolina, Vrátnanka *+49.25/+19.04*, (VIII), ZMHB (3). – Reserve Stuzica (Slov. or. bor.) *+49.08/+22.53*, (VII), coll. Smetana, CNCI (12). – Banská Bystrica

+48.74/+19.15, (IV), coll. Roubal, SNMC (5), coll. Stöcklein, NHMB (1). – Jezersko (Spišská Magura) *+49.31/+20.36*, coll. Roubal, SNMC (1), coll. Lokay, NMPC (2). – Pieniny, Dunajec river *+49.39/+20.41*, coll. Roubal, SNMC (3). – Nízke Tatry, Zahradky, Demanovska Dolina *+48.98/+19.60*, (VII), coll. Schülke (1). – Nízke Tatry, Demanovska Dolina, Pavčina Lehota, 650m *+49.03/+19.56*, (VII), ZMHB (5), coll. Schülke (4), HNHM (2). – Nízke Tatry, Jasenie *+48.84/+19.47*, (V), coll. Roubal, SNMC (1), coll. Kouřil, NMPC (1). – Vrátna Dolina (Malá Fatra), Vrátnanka ufer, 600m *+49.20/+19.10*, (VIII), ZMHB (30). – Liptóújvár [Liptovský Hrádok], F.-vágtelep *+49.05/+19.65*, (VII), HNHM (2). – Fenyőháza [L'ubochňa], Gombás [Hubová] *+49.12/+19.17*, (VIII), HNHM (1). – Vysoké Tatry, Tátrafüred [Starý-Smokovec] *+49.14/+20.22*, HNHM (3). – Vysoké Tatry, Kôprová dolina, Vyšná Závrat', up from the bridge in Garajova dolina, 1450m *+49.19/+20.00*, (VII), HNHM (1). – Vysoké Tatry, Kôprová dolina, Kôprovský potok near Kmet'ov vodopád, 1200m *+49.18/+19.99*, (VII) HNHM (7). – Belianske Tatry, Bélapatak [Biela] (stream) *+49.23/+20.32*, HNHM (9). – Čergov, valley of Pasterník stream, 550m *+49.20/+21.27*, (VI and VIII-IX), SMBC (24). – Čergov, bank of Večný stream, 620-650m *+49.25/+21.08*, (VI), SMBC (2). – Bukovské vrchy, bank of Zbojský stream, 450m *+49.04/+22.47*, (VI), SMBC (3). – Belianské Tatry, Ždiar, stream Biela *+49.28/+20.36*, (VII), SMBC (1). – Nová Sedlica, Zbojský stream 450m *+49.04/+22.48*, (VI-VII), SMBC (3). – Pieniny, pr. Dunajca, Borštých pramen v machu *+49.40/+20.37*, (IX), SMBC (1). – Ždiar, Monkova dolina, 1300m *+49.25/+20.22*, (VIII), coll. Mantič (15). – Tatranská Javorina - Pod Muráňom, Med'odolský potok *+49.25/+20.16*, (VIII), coll. Mantič (9). – Tatranská Kotlina env. - Dolina Siedmich prameňov *+49.22/+20.29*, (IX), coll. Mantič (4). – Lysá Poľana *+49.26/+20.12*, (IX), coll. Mantič (1). — **ROMANIA:** Retezat Mts., Rîul Mare (between junction of streams Zlata and Valea Mare) (ROM1M00 001), 45°23'40"N, 22°46'30"E, 790m, (V), SEMC (2). – Retezat Mts., stream Stînișoara (at Pietrele Cabana) (ROM1M00 006), 45°24'00"N, 22°52'40"E, 1400m, (V), SEMC (2). – Retezat Mts., stream Pietrele (at Gențiana Cabana) (ROM1M00 009), 45°23'10"N, 22°53'00"E, 1720m, (V), SEMC (1). – Retezat Mts., Nucșoara (between Cîrnic and Nucșoara) sandy-stony riverbed of Nucșorul (ROM1M00 012), 45°28'25"N, 22°54'25"E, 900m, (V), SEMC (3). – Retezat Mts., stream Stînișoara at Pietrele Cabana, 45°24'20"N, 22°52'37"E, 1510m, (VI), HNHM (8), MGAB (4). – jud. Hunedoara, P.N. Retezat, 2km W Lunca Rotunda, Lăpușnicu Mare, 45°19.0'N, 22°45.5'E, 1100m, (V), HNHM (3), MGAB (35). – jud. Hunedoara, P.N. Retezat, 1km NE Lunca Berhina, Lăpușnicu Mare, 45°17'N, 22°51'E, 1300m, (V), HNHM (3), MGAB (4). – jud. Hunedoara, P.N. Retezat, Gura Bucurei, stream Peleaga, 45°20'N, 22°54'E, 1600m, (V), HNHM (3). – jud. Alba, 2km SW Bedeleu, small (S) stream, 46°24.5'N, 23°28'E, 800m, (VI), HNHM (2). – jud. Alba, stream V. Morii near Huda lui Păpară, 46°23'N, 23°27.5'E, 800m, (VI), HNHM (3). – jud. Hunedoara, P.N. Retezat, cab. Pietrele, stream Stînișoara, 45°24' N, 22°53' E, 1400m, (VII), HNHM (19), MGAB (6). – jud. Hunedoara, P.N. Retezat, near confluence of streams Stînișoara and Pietrele, 45°24'N, 22°53.5'E, 1350m, (VII), HNHM (8). – jud. Sibiu, bank of stream Laița, 2km S Cârțișoara, near bridge, 1km W stream Cârțișoara (4) 45°42'17"N, 24°34'11"E, 520m, (V), HNHM (1), MGAB (1). – jud. Brașov, Munții Bucegi, Pârăul Mare (V. Ghimbavului), near Vf. Runcu, 7km E Bran (6) 45°30'51"N, 25°27'10"E, 770m, (V), HNHM (4). – jud. Brașov, Munții Bucegi, Pârăul Mare (V. Ghimbavului), near Dl. Stănicica, 8km E Bran (8) 45°30'06"N, 25°28'09"E, 770m, (V), HNHM (3). – jud. Brașov, Munții Bucegi, Pârăul Mare, near Strempeni, V. Glăjeriei, 8km E Bran (10) 45°29'31"N, 25°28'26"E, 970m, (V), HNHM (5), MGAB (7). – jud. Brașov, Munții Bucegi, streamlet near Strempeni, Muchia Turnului, 8km E Bran (11) 45°30'03"N, 25°28'05"E, 930m, (V), HNHM (2). – jud. Mureș, Munții Căliman, 7km N Lunca Bradului, shadowed part of stream Ilva (25) 47°00'49"N, 25°06'08"E, 720m, (V), HNHM (3). – jud. Suceava, Munții Căliman, stream Dorna, 3km SW Băta Cioieni 7km S Dornișoara (52) 47°10'38"N, 25°05'20"E, 1180m, (VI), HNHM (3), MGAB (1). – jud. Argeș, Munții Făgăraș, shaded campsite at bridge on stream Capra, 5km SSW Lac Bîlea (58), 45°34'14"N, 24°36'41"E, 1280m, (VI), HNHM (3), MGAB (3). – jud. Sibiu, Munții Făgăraș, stream Cârțișoara on plateau 2.5km N Lac Bîlea (61), 45°37'06"N, 24°36'46"E, 1630m, (VI), HNHM (1). – jud. Bihor, Munții Bihor, Băița, stream Crișul Băița, 4km S Mt. Prislop, near road leaving stream (70), 46°28'53"N, 22°35'28"E, 470m, (VI), HNHM (1). – jud. Bihor, Munții Bihor, Bubești, forested confluence at stream Luncșoara, 1km E Cantonul Luncșoara (71), 46°32'00"N, 22°41'51"E, 970m, (VI), HNHM (4), MGAB (12). – jud. Alba, Munții Trascău, Cheile Rîmețului, stream Geoagiu, deep gorge, 1.5km ESE Cheia (74), 46°17'32"N, 23°27'54"E, 550m, (VI), HNHM (7), MGAB (1). –

jud. Sibiu, Munții Lotrului, "Cabana Eco", stream Lotrioara under confluence with stream Lotriorul (81), 45°34'45"N, 24°07'14"E, 850m, (VII), HNHM (2). – jud. Prahova, 0.5km E Azuga, stream Azuga, at confluence with stream Urechea, shaded bank (95) 45°26'43"N, 25°35'40"E, 990m, (VII), HNHM (4). – jud. Prahova, Munții Ciucaș, 4.5km N Cheia, Fintina "N. Ioan", at the spring (102), 45°30'00"N, 25°56'45"E, 1350m, (V), HNHM (4), MGAB (9), same but (103), HNHM (3), MGAB (10). – jud. Brașov, 2.5km SE Brădet, stream Tărlung, gravelbank under and near bridge (104), 45°33'11"N, 25°47'00"E, 760m, (V), HNHM (4), MGAB (1). – jud. Alba, Munții Trascău, Cheile Vălișoarei, 2km SE Vălișoara, deep gorge (112), 46°22'49"N, 23°34'52"E, 410m, (VI), HNHM (2). – jud. Harghita, Munții Giurgeu, 1km NE Heveder, stream Șipoș, bank at private bridge (115), 46°40'12"N, 25°39'24"E, 870m, (VI), HNHM (1). – jud. Dâmbovița, Munții Bucegi, forested part of Ialomița in Cheile Ursilor, under Piciorul Babelor (137), 45°23'59"N, 25°26'34"E, 1620m, (VII), HNHM (2). – jud. Dâmbovița, Munții Bucegi, stream Ialomița under Padina, 0.8 km S Schitul Peștera (139), 45°23'19"N, 25°26'05"E, 1490m, (VII), HNHM (1). – jud. Prahova, Munții Bucegi, Bușteni (Poiana Palanca), V. Jepilor (V. Caraiman) (146), 45°24'18"N, 25°31'41"E, 1010m, (VII), HNHM (1). – jud. Harghita, Băile Tușnad, dark, forested cascade of stream Minei right before confluence with Olt (150), 46°09'01"N, 25°51'29"E, 620m, (VII), HNHM (1). – jud. Mureș, Munții Gurghiuului, 1km S Iod, valley of stream Iod (160), 46°57'47"N, 24°58'35"E, 540m, (IX), HNHM (1). – jud. Harghita, 6km W Remetea, Poiana Cătălin, stream Eseniu, bank at clearing (188), 46°47'24"N, 25°19'23"E, 1000m, (V), HNHM (2). – jud. Harghita, 4km SW Toplița, stream Alunișul, wide, stony bank (190), 46°54'06"N, 25°18'26"E, 750m, (V), HNHM (3), MGAB (18). – jud. Alba, Munții Bihor, Gârda (de Sus), confluence of p. Dizditu and Arieșu Mare (222), 46°27'25"N, 22°51'02"E, 720m, (VI), HNHM (1). – jud. Bacău, Munții Ciucului, 3km E Valea Uzului, bank of r. Uz, Kőközi-szoros (261), 46°20'13"N, 26°17'22"E, 580m, (X), HNHM (3). – jud. Hunedoara, Munții Retezat, W Nucșoara, p. Nucșorul, island in wide bed, 1km N road bridge (371), 45°28' 38"N, 22°54' 23"E, 680m, (VI), HNHM (1). – jud. Hunedoara, Munții Retezat, Gura Bucurei, under bridge on p. Peleaga at p. Bucura confluence (372), 45°20'19"N, 22°53'37"E, 1600m, (VI), HNHM (3). – jud. Hunedoara, Munții Retezat, Gura Bucurei, canyon of p. Peleaga 0.2km E p. Bucura confluence (374), 45°20'18"N, 22°53'44"E, 1600m, (VI), HNHM (5), MGAB (7). – jud. Brașov, P.N. Piatra Craiului, 0.5 km SW Cab. Curmătura, streamlet N of Muchia Curmăturii (443), 45°32'47"N, 25°15'02"E, 1400m, (VI), HNHM (3), MGAB (1). – jud. Brașov, Culoarul Rucăr-Bran, 2.0km SW Fundățica, Peștera Ulucelor, stream from entrance (459), 45°24'35"N, 25°15'47"E, 950m, (VII), HNHM (1). – jud. Argeș, P.N. Piatra Craiului (Gr. Dâmbovița Gorges), 0.3km ESE Rucăr, end of Cheile Dâmboviței (465), 45°23'08"N, 25°10'56"E, 740m, (VII), HNHM (2). – jud. Harghita, Munții Ciucului, 4km ESE Iacobeni, Borvíz stream S of "Salutaris" spring (514), 46°11'20"N, 26°09'11"E, 820m, (VII), HNHM (1). – jud. Brașov, Munții Făgăraș, 2.7km S Breaza, pâraul Breaza, 0.3km NW Schitul Breaza (552), 45°40'34"N, 24°52'53"E, 700m (VI), HNHM (1). – jud. Brașov, Munții Piatra Mare, 2.7km SSE Timișu de Jos, pâraul Sipoaia below Canionul Șapte Scări (553), 45°34'11"N, 25°38'31"E, 960m, (VII), HNHM (10). – Curcubăta (Mt.), Bihar-Gebirge *+46.78/+22.58*, NHMW (1). – Siebenbürgen, Mt. Sarco [Szárkö] *+45.20/+22.60*, NHMW (1). – Radna-Borberek [Valea Vinului] *+47.48/+24.83*, coll. Reineck in coll. Bosch, SMFD (1). – Munții Trascău, Valea Măiestirei *+46.28/+23.55*, (VII), coll. Janák (4). – Munții Godeanu, Valea Paltinei, 1200-1400m *+45.23/+22.65*, (VIII), coll. Janák (1). – Gyimes (Siebenbürgen) *+46.54/+26.00*, (V), coll. Bierig, FMNH (2). — **BOSNIA-HERZEGOVINA:** Hercegovina, Gacko *+43.17/+18.53*, (VIII), coll. Lohse, MHNG (2). – Sarajevo, Vranica Planina *+43.95/+17.71*, (V), coll. Renner (1). – Bosnia, near Sarajevo, Mujaković, 550m *+43.97/+17.82*, (V), coll. Wunderle (3). – Bosnia, near Sarajevo, Dusina, 600-700m *+43.88/+17.93*, (V), coll. Wunderle (2). – Bosnia, Pazarić, Krupa-Thal *+43.76/+18.19*, (IX-X), NHMW (1), coll. Fodor, HNHM (3). – Bosnia, Pazarić *+43.78/+18.17*, (VI-VII), ZMHB (1), ZSMC (3), coll. Fodor, HNHM (7). – Bosnia, Prozor *+43.82/+17.62*, coll. Leonhard, NHMW (2). — **MONTENEGRO:** Vusanje *+42.53/+19.84*, (IX), ZSMC (1). — **BULGARIA:** N-Bulgarien, Jumrukschal (Mt.) *+42.72/+24.92*, coll. Breit, NHMW (1). – Rila, a. Bistriza, unterhalb Borovec, 1200m *+42.23/+23.18*, (IX), ZMHB (1). – Rhodopen Čepelare, Sabardska Reka *+41.73/+24.68*, (X), ZMHB (1). – Pirin-Gebirge, Popina Ljaka [near Tremosnica], 1400m *+41.56/+23.28*, (VII), SDEI (2). – Pirin, Pirin Mt., 1600m *+41.83/+23.30*, (VII), SDEI (1). – Sofia, German m. *+42.63/+23.28*, (VI), coll. Rambousek,

NMPC (1). — **UKRAINE:** Gyertyánliget [Кобилецькая Поляна] *+48.04/+24.05*, (VIII), HNHM (1). — Carpath. or., Worochta [Vorokhta], Prut [river] *+48.29/+24.57*, (VI), coll. Lokay, NMPC (2). — Сколе, Земляника п. *+49.04/+23.52*, (VIII), coll. Petrenko (1). — **TURKEY:** Kastamonu prov., E Inebolu (9) *+41.97/+33.77* (V), NHMW (1♀). — Antalya, Güneycik, bank of Karpuz river, 600m *+36.75/+31.77*, (I), coll. Assing (6). — Antalya, Yaylaalan, 900m *+36.95/+31.48*, (XII), coll. Assing (1). — Antalya, 5km NW Kemer, felsiges Flussufer in Schluchttal (030a), 36°36'03.0"N, 30°29'03.6"E, 197m, (III), HNHM (1). — Antalya, Köprülü-Kanyon, 1km N Beskonak (051), 37°11'14.4"N, 31°10'47.3"E, 178m, (III), HNHM (1). — **GEORGIA:** Trialetskij Khrebet, Bakuriani, 1800-2200m *+41.75/+43.55*, (VII), coll. Schülke (13), HNHM (2). — Osset near Kazbegi, fl. Terek, 1800m *+42.66/+44.65*, (VII), SDEI (1). — Abkhazia, Gumistinskij Nature Reserve, Tsumuri, Vostochnaya Gumista River bank, 420m *+43.23/+41.07*, (VII), coll. Gusarov, ZMUN (1).

Ochtheophilus rosenhaueri (Kiesenwetter, 1850)

NON-TYPE MATERIAL EXAMINED: **SPAIN:** Catalogne: Seo de Urgel (Arfa), arr. De la Coma *+42.33/+01.42*, (V-VI), ISNB (1). — **FRANCE:** Provence, Digne *+44.10/+06.23*, (IV), coll. Renner (1). — Alpes-Maritimes, Sospel *+43.88/+07.45*, coll. Lokay, NMPC (1). — Alpes-Maritimes, Venanson *+44.05/+07.25*, (VI), coll. Dauphin (1). — Rhone-Alpes, dept. Isore, Boulc-Tal, SE Die, 800m *+44.74/+05.37*, (VII), SMNS (1). — Hautes Provence, Annot, Vaire (stream), 900m *+43.95/+06.68*, (VI), coll. Wunderle (5), coll. Renner (1). — Hérault, Lattes *+43.57/+03.91*, MHNG (1). — Var, St. Aygulf, in. Argens *+43.42/+06.71*, (XI), MHNG (1). — Var, Agay *+43.42/+06.86*, (XI), MHNG (2). — Vernet-les-Bains, Pyr. or. *+42.55/+02.38*, coll. Ihssen, ZMHB (1). — Nyons *+44.37/+05.13*, coll. Fauvel, ISNB (1). — Sorèze (Tarn) *+43.48/+02.06*, ISNB (1), MMUE (1). — St. Florentin *+48.00/+03.73*, coll. Fauvel, ISNB (1). — Corsica, Porto *+42.25/+08.72*, (V), coll. G. Benick, MHNG (1). — Corse, Bocognano *+42.08/+09.06*, (VI), coll. Coiffait, MNHP (1). — Corse (Sud), Bocognano, cascade [du Voile de la Mariée] *+42.06/+09.05*, (V), coll. Dauphin (2), HNHM (1). — Corse, Vizzavona *+42.12/+09.13*, (V), coll. Coiffait, MNHP (3), coll. Ochs, MHNG (1). — Corse (Nord), Vizzavona, Ruisseau d'Omenino, 42°08'25.4"N, 9°08'55.0"E, 870m, (V), coll. Dauphin (1). — **GERMANY:** Rheinland-Pfalz, umg. Wagenhausen, Litzbach (ufer) *+50.15/+06.98*, (V), coll. Schülke (1). — München, Grünwald *+48.06/+11.52*, (VI), coll. Ihssen, ZMHB (1). — Thüringia, Thüringerwald, Finsterbergen *+50.83/+10.58*, (VII), ZMHB (1). — Thüringien, Gotha - Apfelstädte Bach *+50.90/+10.88*, (V), coll. Lott, BMNH (1). — Paderborn, Frankenberg *+51.72/+08.77*, coll. Eppelsheim, NHMW (7), ZMHB (3). — Bad Wimpfen *+49.23/+09.13*, PMSL (1). — Westphalia, Eichhoff *+50.83/+09.68*, coll. Schneider-Kelch, SDEI (1). — Ahrweiler, Fuss *+50.55/+07.08*, coll. L. v. Heyden, SDEI (3), coll. Eppelsheim and coll. Hauser, NHMW (3), ZMHB (1). — Neuenahr, Ahr-ufer in sand *+50.55/+07.13*, coll. L. v. Heyden, SDEI (1). — Jülich, Eichlef. *+50.93/+06.37*, coll. Neumann, SMFD (2). — **SWITZERLAND:** Kt. Genève, Allondon, les Baillets *+46.20/+06.00*, (X), MHNG (1). — Kt. Genève, Chancy, La Laire Rau, 350m, 46°08'30"N, 5°58'38"E, (V), (HNHM (15)). — Kt. Genève, Chancy, La Laire Rau, 350m, 46°08'32"N, 5°58'53"E, (V), (HNHM (14)). — Kt. Genève, Chancy (15km SW Genf), 350m, la Laire (river) *+46.15/+05.97*, (V, X), coll. Gollkowsky (3), MHNG (2). — Engelberg *+46.81/+08.42*, (VI), coll. C. Stock, SMFD (1). — Kt. Bern, Hasle, Emmeufer *+46.98/+08.05*, (V), MHNG (1). — Kt. Genève, Chancy, la Laire *+46.15/+05.97*, (VI and VIII), in part coll. Rehous, MHNG (3). — Kt. Genève, la London (river, left side) *+46.17/+06.02*, (II and III), MHNG (3). — **AUSTRIA:** Nordtirol, Unterperfuss *+47.26/+11.26*, (V), MMUE (1). — [Vorarlberg, Rätikon,] Scesaplana *+47.05/+09.69*, (VII), coll. Lokay, NMPC (1). — Kärnten, Reisach *+46.65/+13.15*, coll. Bernhauer, FMNH (1). — Salzburg *+47.78/+13.08*, coll. Stenius, MZHF (1). — S-Kärnten, Trögerner Klamm near Eisenkappel *+46.47/+14.50*, (VI), coll. Schülke (1). — umg. Wien *+48.23/+16.15*, coll. Klima, NHMW (1). — Grünburg *+46.85/+14.57*, coll. Klima, NHMW (3). — Allgäu *+47.40/+10.25*, coll. Kraatz, SDEI (1). — Mauthen, Valentinb., 700m *+46.67/+13.00*, (VII), coll. Bernhauer, FMNH (1). — **ITALY:** Alpi Carniche, SW M. Coglians Collina, Rif. Tolazzi, 1350m *+46.59/+12.85*, (VII), coll. Assing (2). — Ligurischer Appennin, Rezz[o]aglio *+44.53/+09.38*, (V), coll. Lohse, MHNG (1). — Ligurischer Appennin, Mte. Penna *+44.48/+09.49*, (VI), coll. Lohse, MHNG (1). — Italia centr., Camerata Nuova

+42.02/+13.10, coll. Leonhard, NHMW (2). – Bazzano *+44.50/+11.08*, coll. Rambousek, NMPC (2). – Friuli - Ven. Giul., Fella-Ufer W Carnia, Eisenbahnbrücke (5), 46°23'N, 13°07'E, 250m *+46.38/+13.12*, (IX), coll. Schülke (2). – Friuli - Ven. Giul., Fella-mündung in den Tagliamento (6), 46°22'17"N, 13°07'01"E, 250m, (IX), coll. Schülke (17), HNHM (1). – Friuli - Ven. Giul., Tagliamento-ufer, S bridge near Codroipo (3), 45°56'50"N, 12°54'49"E, (IX), coll. Schülke (1). – Friuli - Ven. Giul., Fella-Ufer W Carnia, 46°23'N, 13°07'E, 250m, (IX), coll. Schülke (4). – dint. Anghiari, stream Sovara *+43.53/+12.05*, (I), coll. Baliani, MSNV (4). – Panaro river *+44.92/+11.42*, (IV), coll. Ranconi, MSNV (1). – Caldonazzo (TN), bank of stream Centa, 500m *+45.98/+11.27*, (VI), coll. Tagliapietra (3), coll. Zanetti (25). – Val di Ronchi (TN) *+45.77/+11.00*, (X), coll. Zanetti (1). – Forni di Sopra (UD), rif Giau, 1000m *+46.43/+12.58*, (VII), coll. Zanetti (1). – Longarone (BL), Provagna, 400m, bank of Piave *+46.27/+12.29*, (IV), coll. Zanetti (5). – Emilia, T. Parma, near Ghiare de Corniglio, 470m *+44.47/+10.08*, (V), coll. Assing (9). – Trento, Vallarsa *+45.78/+11.12*, coll. Strupi, NHMW (1). – Macugnaga, Monte Rosa *+45.97/+07.97*, (VI), coll. Ihssen, ZMHB (1). – Toscana, Fornovolasco *+44.03/+10.37*, (VI), coll. Scheerpeltz, NHMW (1). – Julische Alpen, Tarvis [Tarvisio] *+46.50/+13.58*, coll. Bernhauer and coll. Knirsch, FMNH (3), ZMHB (1). – Imola *+44.35/+11.70*, coll. Eppelsheim, NHMW (3). – Isoverde *+44.68/+08.82*, (XI), coll. Mancini, MCSN (2). – Arcidosso, prov. di Grosseto *+42.87/+11.55*, (VII), coll. Binaghi, MCSN (11). – Rezzoaglio d'Aveto, Liguria *+44.53/+09.38*, (IX-X), coll. Binaghi, MCSN (7). – Cardoso, Alpi Apuane *+44.02/+10.48*, (V), coll. Mancini, MCSN (4). – Busalla *+44.57/+08.95*, (IX-XI), MCSN (1). – Ameglia, Liguria or. *+44.07/+09.95*, (IX), coll. Mancini, MCSN (1). – Vallombrosa, Toscana *+43.73/+11.53*, (V), coll. Mancini, MCSN (1). – Lago di Garda *+45.67/+10.68*, SMFD (1), NHMW (6), ZMHB (2), coll. Bernhauer, FMNH (2). – Sicilia, NW Francavilla, 480m *+37.93/+15.10*, (V), coll. Assing (3). – Sicily, Monti Peloritani, Ponte (ME), F. so Buzzuratti *+38.08/+15.50*, (V), coll. Adorno (4). – Sicily, Monti Peloritani, Santa Lucia del Mela (ME), V. ne Ferra, a valle cascata Sghiccia Saitta, 540m *+38.15/+15.28*, (VI), coll. Adorno (1). — **SLOVENIA**: Julische Alpen, Triglav, Kranjska Gora, fluss Pisinca, 830m *+46.48/+13.79*, (VII), coll. Gollkowski (1). – Wochein [Bohinj], Savica *+46.25/+13.98*, (VII), coll. Bernhauer, FMNH (3), NHMW (1). — **CZECH REPUBLIC**: Mittelböhmén, Davle b. Prag *+49.88/+14.40*, coll. Skalityzky, NHMW (1). — **SLOVAKIA**: Carp., Trencsén *+48.90/+18.05*, coll. Knirsch, FMNH (1). — **ROMANIA**: Transylvania, Rotenturm-Pass *+45.58/+24.27*, NHMW (1). — **CROATIA**: Dalmatia, Castelnuovo *+42.45/+18.53*, coll. Leonhard, NHMW (1). — **BOSNIA-HERZEGOVINA**: Hercegovina: Idbar Thal *+43.65/+17.88*, coll. C. Bosch, SMFD (1). – Bosnia, Prozor *+43.82/+17.62*, coll. Leonhard, NHMW (2). – Pazarić *+43.80/+18.15*, (VI), coll. Palm, MZLU (2). – Sarajevo *+43.86/+18.44*, HNHM (1). – Stolac *+43.08/+17.96*, coll. Apfelbeck, HNHM (4), coll. Bernhauer, FMNH (1). — **ALBANIA**: Tumor - Buranj *+40.69/+20.26*, coll. Bernhauer, FMNH (1). — **MACEDONIA**: 25km N Ochrid, flussufer nahe Belčište *+41.32/+20.80*, (VI), ZMHB (1). — **GREECE**: Evrytania peripheral unit, Anatoliki Fragista, small river + stream N of village, 38°57.577'N, 21°36.750'E, 550m, HNHM (9). – Fthiotis, SW Lamía, Inachos, river bank (9) 38°49'31"N, 22°04'58"E, 470m, (IV), coll. Wunderle (1), coll. Assing (1), HNHM (1). – Fthiotis, 40km W Lamía, bank of Sperchios river (14) 38°55'46"N, 21°59'19"E, 700m, (IV), coll. Wunderle (1), coll. Assing (5). – Fokis, 25km SW Lamía, Stromi, riverbank (13), 38°41'24"N, 22°12'54"E, 640m, (IV), coll. Assing (1). – Epirus, Nomós Ioánnina, Timfi-Gebirge, bei Papingó, 900m, Laubwald *+39.97/+20.68*, (V), SMNS (4). – Kalávryta, Morea *+38.03/+22.12*, coll. Breit, NHMW (25). – Lesbos *+39.17/+26.33*, ISBN (2). — **CYPRUS**: Troodos-Geb., Marathassa - Pedoulas, Ayios Ioannis, 600m [34°59'26"N, 32°49'49"E], (IV), coll. Wunderle (1). — **GEORGIA**: Абхазия, Гумистинский заповедник, Цумури, 420m, отмель реки Восточная Гумиста *+43.23/+41.07*, (VII), coll. Gusarov, ZMUN (1). — **TURKEY**: Antalya, nahe Cakirlar, flussuferin nassem schotter (023a), 36°48'51.5"N, 30°28'15.8"E, 197m, (III), HNHM (2). – Antalya, 5km NW Kemer, felsiges Flussufer in Schluchttal (030a), 36°36'03.0"N, 30°29'03.6"E, 197m, (III), HNHM (1). — **UKRAINE**: Carpath. or., Worochta [Vorokhta], Prut [river] *+48.29/+24.57*, (VI), coll. Lokay, NMPC (2). — **RUSSIA**: Krasnodar Terr., Tuapse, Nebug *+44.17/+39.02*, (V), coll. Gusarov, ZMUN (10). – Краснодарский край, Сочи, Лазаревское, сад, ловчие банки (pitfall traps) *+43.91/+39.33*, (I-II), coll. Gusarov, ZMUN (1). – Iaila-

Gebirge, Krim *+44.53/+34.12*, coll. Bernhauer, FMNH (1). — Ялтниск. у. [Крым], Таушан-Базар [Привильне] кошеніе *+44.80/+34.34*, (V), ZISP (2).

Ochtheophilus sericinus (Solsky, 1874)

NON-TYPE MATERIAL EXAMINED: **ARMENIA**: Araxesthal *+38.90/+46.02*, coll. Reitter, HNHM (1). — **GEORGIA**: Osset bei Kasbegi, 1800-2500m *+42.66/+44.65*, (VII), coll. Schülke (2). — Osset bei Kasbegi, fl. Terek, 1800m *+42.66/+44.66*, (VII), coll. Schülke (1). — **IRAN**: N-Iran, C-Elburz, Val Darband Sar, 2500-3000m *+36.02/+51.48*, (VII), exp. Nat. Mus. Praha, NMPC (6). — **AZERBAIJAN**: Helenendorf [Ханлар] *+40.58/+46.29*, coll. Reitter, HNHM (4), coll. Heyden, SDEI (1). — **AFGHANISTAN**: NE, Petsch-Tal, "O v.", Schari-Sarai, 1100m *+34.94/+71.31*, (VII), NHMW (1 ♂). — Nuristan, Bashgultal, 1150m *+35.37/+71.55*, (V), coll. Scheerpeltz, NHMW (1). — NE, Badakschan, Kokschatal, Senna, 1800m *+36.70/+70.84*, (VII), coll. Scheerpeltz, NHMW (1), NMPC (1). — **KYRGYZSTAN**: W. Tian Shan, Koksai Gorge, 2100m *+40.88/+76.73*, (VI), coll. Rougemont, OXUM (1). — Sandalash Range, Kanysh Kija env. 1440m *+41.75/+71.04*, (VI), coll. Schülke (1). — **TAJIKISTAN**: Hissar Mts., Kondara *+38.90/+68.77*, (VII), NHMB (3), HNHM (2), MHNG (2). — Pamir-Alai, Hissar Mts., Adshuk[Adjuk]-cleft near Warsob, 1200m *+38.67/+68.78*, (VII), coll. Schülke (5), HNHM (2). — Pamir-Alai, Seravshan Valley near Novabad *+39.50/+70.19*, (VII), coll. Schülke (1). — Pamir-Alai, Seravshan Mts., Rudaky, 1500m *+38.13/+68.96*, (VII), coll. Schülke (4), MHNG (1), HNHM (1). — **UZBEKISTAN**: 40km S Shakhrissabz, riverbank of Kyzyl-Dar'ya river, above Suvlisoy, 1200m *+38.58/+66.81*, (V), coll. Gusarov, ZMUN (35). — **KAZAKHSTAN**: prov. Almaty, Mt. Torajgyr, Charin valley, 7km SE Alasay Pass, 43 16'N, 79 00'E, 1000m, (V), HNHM (1). — Джунгар[ский Алатау], р. Кескен-терек *+44.64/+78.89*, 28.VIII.1988, [leg.] В. Кашеев, [берега горных рек] (ZISP, 1) [a misidentified paratype of *Ancyrophorus ketmenicus*]. — **CHINA**: Nei Mongol, Mt. Helan, Halawu, a fork on a road to the summit, 38.86540°N, 105.88934°E, 2244m, (VIII), IZAS, (1 ♂, 8). — Xinjiang, Lop Lake Nature Reserve, 39.06192°N, 90.21942°E, 2595m, (V), IZAS (2 ♀).

Ochtheophilus strandi (Scheerpeltz, 1950)

NON-TYPE MATERIAL EXAMINED: **NORWAY**: Finnmark, Sor-Varanger *+69.73/+30.13*, coll. Roubal, SNMC (3). — Rundhaug, M. elv. *+69.03/+18.90*, MMUE (1), coll. Smetana, CNCI (1), ZMHB (1). — Nordreisa, Bilot *+69.47/+21.50*, MMUE (1), coll. Smetana, CNCI (1), ZMHB (1). — Framnes, M. elv. *+68.43/+17.38*, (VI), coll. Palm, MZLU (1). — Troms, Målselva [Framnes, Maalselven] *+69.23/+18.50*, (VI and VIII), MZLU (2), coll. Stockmann, MZHF (1). — Troms, Nordreisa *+69.77/+21.05*, (VI), MZLU (23), HNHM (2). — Karasjok *+69.50/+25.60*, coll. C. Stock, SMFD (1). — Bojobæski *+69.78/+24.20*, (VII), exp. Münster, ZMUN (37), coll. Smetana, CNCI (1). — Jakobselv *+69.75/+30.80*, ZMUN (10), MHNG (1 ♂, 1 ♀). — Alten *+69.95/+23.20*, (VI), exp. Münster, ZMUN (4), HNHM (1). — Bossekop, Alten *+69.95/+23.20*, (VI), ZMUN (1). — Karasjok *+69.50/+25.60*, exp. Münster, ZMUN (2). — Kongsberg *+59.70/+09.60*, ZMUN (1). — Oppland, Sjøa *+61.68/+09.54*, coll. A. Vik, ZMUN (2). — **SWEDEN**: Medelpad, Ljustorp, Åsäng (4102b) *+62.61/+17.39*, (VII), HNHM (1). — Lule Lappmark, Litnok *+66.96/+17.78*, (VII), coll. Muona, MZHF (1). — Lule Lappmark, Vietas *+67.50/+18.42*, (VI), coll. Wunderle (1). — Abisko, Torne Lappmark *+68.33/+18.85*, (VI-VII), in part coll. Palm, MZLU (13). — **FINLAND**: Itä-Suomi: Pohjois-Karjala, NP Koivusuo, Koitajoki (F18k) 62°56.11'N, 31°26.34'E, (VI), coll. Vorst (2). — Lapponia inarensis, Utsjoki, 776:50 *+69.88/+27.00*, (VII), coll. Muona, MZHF (1). — Kuusamo, Ks 730:60 *+65.97/+29.18*, (VI), coll. Muona, MZHF (1). — Lapponia inarensis, Utsjoki, Karigasniemi (Teno river bank) *+69.41/+25.81*, (VII), coll. Clayhills (1). — Lapponia inarensis, Inari, Ivalo (Ivalo river bank) *+68.62/+27.49*, (VII), coll. Clayhills (5), HNHM (2). — Kuusamo (Ks), Oulanka (Oulanka river under Kiuttaköngäs rapid) *+66.37/+29.33*, (VII), coll. Clayhills (3). — **RUSSIA**: Lapponia rossica, Petsamo [Pechenga] *+69.55/+31.20*, coll. Lindberg, MZHF (1). — Lapponia rossica, Yläluostari *+69.43/+31.00*, MZHF (1). — Красноярск[ий] кр[ай] р[ека] Елогуй №140 Рыбкин «Красноярский край, Туруханский район, Елогуйский заказник, р. Елогуй, 6км ниже устья р.Тына. 70м. Берег реки: песок, осоки, злаки, хвощ, мхи, Alnus и др.» = Krasnoyarsk Territory, Turukhanskiy District,

Yeloguyskiy Refuge, Yeloguy River, 6km below mouth of Tyna River *+61.95/+86.04*, (VII), coll. Ryvkin via M. Gildenkova (1). — Красноярск[ий] кр[ай] р[ека] Елогуй №99 Рывкин «Красноярский край, Туруханский район, Елогуйский заказник, р.Елогуй, 6км ниже устья р.Тына. Под сеном на тропинке близ кордона.» = Krasnoyarsk Territory, Turukhanskiy District, Yeloguyskiy Refuge, Yeloguy River, 6 km below mouth of Tyna River, 70 m *+61.95/+86.04*, (VIII), coll. Semenov via M. Gildenkova (2). — Красноярск[ий] кр[ай] Ц[ентрально-] Сиб[ирский] Заповеди[ик], Сп. 21 р[ека] Б[ольшая] Росколя «Красноярский край, Туруханский район, Центральносibirский государственный биосферный заповедник, бассейн р. Большая Варламовка: среднее течение р.Большая Раскосая. 140м. В наносах хвои и соломы на берегу реки.» = Krasnoyarsk Territory, Turukhanskiy District, Central Siberian State Biosphere Reserve, Bolshaya Varlamovka River basin: middle flow of Bolshaya Raskosaya River *+62.53/+89.73*, (V), coll. Semenov via M. Gildenkova (3). — Ost-Sibirien, Baikal, Quellgebiet des Irkut *+51.67/+101.22*, coll. Scheerpeltz, NHMW (1♂), coll. Reitter, HNHM (1). — **USA:** ALASKA: George Parks Hwy, 48km SW Cantwell, 550m *+63.06/-149.55*, (VI), coll. Gusarov, ZMUN (7). — mi24 Wales Hwy., Hess Creek, 600' *+65.67/-149.17*, (VII), CNCI (42), MHNG (2). — **CANADA:** YUKON TERRITORY: Dempster Hwy., mi139.5, 1900' *+65.58/-138.17*, (VII), CNCI (1). — Dempster Hwy., mi154, Ogilvie River, 1900' *+65.70/-138.07*, (VII), CNCI (1). — Dempster Hwy., mi81.5, 2800' *+64.85/-138.22*, (VII), CNCI (1). — 11mi W Elsa *+63.92/-135.84*, (VII), CNCI (1♂).

Ochtheophilus venustus (Rosenhauer, 1856)

NON-TYPE MATERIAL EXAMINED: **MOROCCO:** Esmir [Ismir] *+30.92/-08.88*, coll. G. C. Champion, BMNH (1). — **ALGERIA:** Souk el Arba, inond. med Jarde *+35.55/+02.37*, coll. Fauvel, ISNB (1). — Philippeville [Skikda] *+36.86/+06.90*, ISNB (1). — Bougie *+36.72/+05.10*, (IV), coll. Bernhauer, FMNH (1). — **TUNISIA:** Fernana *+36.65/+08.70*, coll. Krogh, SMFD (1), HNHM (2). — **PORTUGAL:** Evora *+38.57/-07.89*, coll. Rambousek, NMPC (1). — Estremadura, Serra de Montejunto, 2km N Alcoentre, 100m *+39.20/-08.95*, (VII), BMNH (8). — **SPAIN:** Mallorca, T. San Miguel, Campanet (DE970047) *+39.78/+02.96*, (I), coll. Lott, BMNH (2). — Alicante, Cocentaina, Rio Penaguila (30SYH2589), 410m *+38.74/-00.42*, (IV), coll. Lott, BMNH (3). — Córdoba *+37.88/-04.77*, (IX), coll. Cl. Müller, ZSMC (2). — Jaén *+37.77/-03.78*, (IX), coll. Cl. Müller, ZSMC (3). — Pais Vasco, Hernani, Rio Urumea (Es501e), 43°15.90'N, 1°58.15'W, (VI), coll. Vorst (1). — Aranjuez pr., Madrid *+40.40/-03.68*, (IV), coll. Lindberg, MZHF (2). — Figueras, bank of Rio Manol *+42.27/+02.97*, (V), MSNV (43). — Andalucia, Ronda, Arr. del Cupil (Es350y), 36°45.21'N, 5°12.46'W, (IV), coll. Vorst (4). — Andalusia (CA), Sierra de Luna, 350m *+36.09/-05.51*, coll. Wunderle (1). — Tarifa, CA *+37.58/-02.42*, (III), coll. Wunderle (5). — Gibraltar *+36.30/-05.53*, coll. G. C. Champion, BMNH (3). — Malaga, Ronda-Gaucin Rd., 10km SW of Ronda, 800-900m *+36.65/-05.25*, (V), BMNH (2). — Algeciras *+36.13/-05.50*, coll. Reitter, HNHM (1). — **FRANCE:** Marmande *+44.50/+00.17*, MHNG (1). — Var, St. Aygulf, in Argens *+43.42/+06.71*, (XI), MHNG (5). — Vienne, R. Gartemp, La Brussière *+46.65/+00.84*, (VI), coll. Lott, BMNH (2). — Avignon, Rhône (l'inond-ns) *+43.95/+04.81*, (III), coll. K. Daniel, ZSMC (2). — Port Vendres *+43.27/+03.22*, coll. Fauvel, ISNB (1). — Sorèze *+43.48/+02.06*, NHMW (2). — Bordeaux, Jourdan *+44.95/-00.54*, (XII), coll. Tempère, MHNG (1). — Carcassonne *+43.22/+02.35*, (VI), coll. Binaghi and coll. Mancini, MCSN (9), in part coll. Fauvel, ISNB (2). — Hérault, Castelnau *+43.63/+03.90*, ISNB (1). — Hérault, Lattes *+43.57/+03.91*, ISNB (1), MHNG (2). — St.-Raphaël *+43.42/+06.76*, SDEI (3). — Alpes-Maritimes, inond. Loup *+43.63/+07.15*, (II), coll. Dauphin (1). — Corse, Ajaccio *+41.92/+08.73*, coll. Bernhauer and coll. Knirsch, FMNH (2). — Ghisonaccia (Corse), gravières du Fiumorbo *+42.00/+09.40*, (V), ISNB (1), BMNH (1), coll. Scheerpeltz, NHMW (4), coll. Palm, MZLU (2). — **ITALY:** Toscana (FI), Grassano, 350m *+43.71/+11.27*, (V), coll. Wunderle (2). — Toscana, Greve *+43.58/+11.32*, (IV), coll. Scheerpeltz, NHMW (1). — Albaredo d'Adige (VR) *+45.32/+11.27*, (II), coll. Zanetti (5). — Legnago *+45.18/+11.30*, coll. Roubal, SNMC (1). — Firenze *+43.77/+11.25*, (V), coll. Binaghi, MCSN (1). — Poggio Cavallo, Grosseto *+42.77/+11.17*, (IV), coll. Binaghi, MCSN (1). — Perugia, Umbria *+43.13/+12.37*, (IV), coll. Mancini, MCSN (2). — Sicily, Palermo *+38.12/+13.37*, coll.

Bernhauer, FMNH (1). – Sizilien, Lentini (SR) *+37.30/+14.99*, (IV), coll. Frey, NHMB (1). – Sardinia, Terranova Pausania *+40.92/+09.52*, (V), coll. Binaghi, MCSN (5). – Sardaigne, Decimomannu *+39.32/+08.96*, ISNB (1). – Sardaigne, Oristano *+39.90/+08.60*, ISNB (2). – Sardaigne, San Vito *+39.43/+09.53*, (IV), ISNB (1). — **CROATIA**: Dalmatia, Castelnuovo *+42.45/+18.53*, coll. Leonhard, SDEI (1). — **GREECE**: Fthiotis, 30km SW Lamía, Amfiklia, Kifisos river (5), 38°46'00"N, 22°32'55"E, (IV), coll. Assing (2). – Fthiotis, 40km W Lamía, bank of Sperchios river (14), 700m, 38°55'46"N, 21°59'19"E, (IV), coll. Assing (4). – Morea, Krestena S. E. *+37.61/+21.63*, (V), ISNB (4). – Crete, Kalonichtis, 35°18'N, 24°23'E, 300m, (II), coll. Assing (1). – Crete, ESE Perama, N Garazo (29), 35°21'05"N, 24°47'01"E, 130m, (IV), coll. Assing (2). – Kreta (South), Agios Galini *+35.11/+24.70*, (IV), coll. Kleeberg (3). – Kreta (West), Lake Kournás *+35.33/+24.28*, (IV), coll. Kleeberg (1). – Crete, Timbaki *+35.07/+24.77*, (III), coll. Lohse, MHNG (1). – Rhodos, Loutani K., obh. Epta Piges *+36.25/+28.15*, (IV), coll. Assing (2). — **TURKEY**: Asia min. occ. Izmir (Ilidja) [Ilica], 60m (St.73) *+35.32/+26.35*, (V), ISNB (1). – 26km S Gaziantep, u. Kilis *+36.82/+37.40*, (IV), NHMW (1). – Antalya, umg. Manavgat, 0-50m (16) *+36.78/+31.43*, (I), coll. Wunderle (2), coll. Assing (5). — **JORDAN**: Zerkatal [Zarqa valley], b. Romana [near Er Rumman], 200m *+32.19/+35.78*, (IV), HNHM (11), MHNG (15). – Jerash, ufer im Wadi Zarqa (9), 32°13'06"N, 35°52'32"E, 250m, (II), coll. Assing (1). — **ISRAEL**: Ouady Wata, Sarona, près Jaffa *+32.07/+34.78*, (III), coll. Fauvel, ISNB (1).

Ochtheophilus vulgaris (Watanabe & Shibata, 1961)

NON-TYPE MATERIAL EXAMINED: **TAIWAN**: Hualien Hsien, Taroko N. P., Nanhusi Hut, 2220m (T48) *+24.34/+121.41*, (V), coll. Smetana (5). – Hualien Hsien, Taroko N. P., Chungyantienshi (Riv.) Waterfall, 2300m (T50) *+24.34/+121.42*, (V), coll. Smetana (1). – Nantou Hsien, Shanlinchi, 1650m (T87) *+23.64/+120.78*, (V), coll. Smetana (1). – Kaohsiung Hsien, creek 4km E Yakou, 2600m (T162) *+23.26/+121.00*, (VII), coll. Smetana (74), HNHM (4). – Kaosiung Co., Yu Shan N. P., tr. Lau Long Str., route 20, 9.5km W of E Park boundary *+23.28/+120.87*, (IV), FMNH (2). – Chienkang, Shung *+25.01/+121.65*, (IV), coll. Ito (2). — **CHINA**: Qinghai Prov., Daban Shan, 62km NW Honggu, creek valley, 36°51'15"-28"N, 102°36'34"-37°07"E, 2236-2350m (CH11-09e), (VII), coll. Schülke, (1 ♂). – Shaanxi, Meixian, Mt. Taibai [+34.00/+107.61], 1800-2000m, (VI), IZAS (1 ♀). – Shanxi, Wutaishan *+39.07/+113.58*, (VI), coll. Rougemont, OXUM (6), HNHM (1 ♀). — **NORTH KOREA**: Tesong-san Mt. [Taesong-san] *+39.08/+125.85*, (V), exp. Inst. Zool. Cr., ISZP (1). – Kymgang-san Mts. [Kūmgang-san] *+38.65/+128.12*, (VI), exp. Inst. Zool. Cr., ISZP (1). – Phote-chon [P'ot'ae-ch'ŏn], distr. Samdzijon *+41.63/+128.30*, (IX), exp. Inst. Zool. Cr., ISZP (1). — **SOUTH KOREA**: Jeollabuk-do, Deogyu-san, Gucheondong stream to Osujagul cave, 6km SSW Sugyeongdae, temple (22B), 35°51'14"N, 127°46'19"E, 950m, (IX), HNHM (2). – Gangwon prov., Jeongseon-gun, Jeongseon-eup, Mt. Gangwangsan, recreation forest, 37°24'54.0"N, 128°32'10.1"E, (V), CNUK (8). — **RUSSIA**: Приморский край, Хасанский район, заповедник "Кедровая Падь". *+43.20/+131.42*, (IX), coll. Gusarov, ZMUN (3). – Prim., Partizansk distr., Alexeyevsky Khrebet, 20km E Sergeyevka, forests near Andreyevka river, 400m *+43.40/+133.58*, (VII), coll. Schülke (3). – Лазовский район, 5км 3 Лар, Прямая Падь *+43.38/+133.84*, (IX), coll. Solodovnikov, ZMUC (2). – Ussuri-Gebiet, rajon Lazo, Mittellaufl. fl. Zelinka [Celinka, tributary of Kievka River, 6 km S Lazo village] *+43.30/+133.86*, (VIII), ZMHB (2). – Schutzgebiet Lazowkij, Kordon "Amerika" [along river Perekatnaya (Su-dzu-he)] (S20) [43°16'16"N, 134°03'01"E], (VI), coll. Schülke (1). — **JAPAN**: Honshu, Gunma pref., Mt. Hotaka (foot), ca. 1300m *+36.78/+139.16*, (VIII), BMNH (1 ♂, 3 ♀, 9). – Gunma pref., Marunuma *+36.80/+139.36*, (VII), coll. Naomi, KUEC (1). – Nara pref., Ohdaigahara *+33.91/+135.86*, (VI), coll. Naomi, KUEC (2). – Tokushima pref., Mt. Tsurugi *+33.85/+134.10*, (VI), coll. Naomi, KUEC (1). – Tottori pref., Mt. Daisen *+35.37/+133.54*, (VI), coll. Naomi, KUEC (38). – Gifu pref., Hirayu *+36.15/+137.50*, (VI), coll. Naomi, KUEC (17). – Niigata pref., Sasagamine, Mt. Myoko *+36.96/+138.23*, (VI), coll. Naomi, KUEC (12), HNHM (1). – Yamanashi pref., Mt. Daibosatsu, Kaminikkawa pass *+35.72/+139.00*, (VII), coll. Naomi, KUEC (5). – Nara pref., Dorogawa *+34.27/+135.88*, (V), coll. Ito (8), HNHM (1). – Nara pref., Mt. Oomine *+34.23/+135.99*, (V and VI), coll. Ito (4).

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